

From: Grace Ockwell
To: Clare.Curran@parliament.govt.nz
Subject: Request for Information - UFB, RBI and Mobile Black Spot Fund 2015
Date: Monday, 19 October 2015 03:56:12 p.m.
Attachments: [Curran, Clare LGOIMA Dunedin City Digital Enablement Plan.pdf](#)
[image001.png](#)
[image002.jpg](#)
[image003.jpg](#)
[image004.jpg](#)

Good afternoon Clare,

Please find attached a copy of the Dunedin City Digital Enablement Plan.

Kind regards,

Grace Ockwell
Governance Support Officer
Civic and Legal

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DUNEDIN CITY DIGITAL ENABLEMENT PLAN

OUR VISION

Our vision with this Digital Enablement Plan (DEP) is to support our city's outlying communities and businesses by helping bridge the internet connectivity divide between urban and rural Dunedin.

Access to faster internet will create a wider reaching, digitally enabled Dunedin. This, supported with the right skills and technology, will enable economic and community development.

STRATEGIC FRAMEWORK

This DEP aligns with well-established and well-funded strategies that recognise the importance of a future led by faster internet connectivity.

strategy

summary

Dunedin Digital Strategy

(attachment 1)

The Dunedin Digital Strategy is aligned with the government's Digital Strategy for New Zealand. This strategy has a vision for using digital technology to create a sustainable, prosperous and vibrant society. The strategy is structured around four key themes:

1. Connection: Providing access to digital services.
2. Content: Ensuring the correct information is available.
3. Capability: Gaining the necessary skills to use technology effectively.
4. Confidence: Raising confidence in using digital technology.

Economic Development Strategy

(attachment 2)

The Strategy recognises that, all things being equal, Dunedin faces the risk of losing business and people to other cities. Ultimately, the Strategy has been developed to increase skills, incomes and job opportunities for Dunedin's residents. The Strategy is built around five themes:

1. Business vitality
2. Alliances for innovation
3. A hub of skills and talent
4. Linkages beyond our borders
5. A compelling destination

Gigatown Plan for Success

(attachment 3)

The Gigatown Plan for Success outlines an action plan for leveraging Gigabit Ultra Fast Fibre (UFB) in Dunedin over the next 3-5 years. The plan has four distinct themes:

1. Innovation: Creating an environment where challenging the norm is the norm.
2. Economic Development: Helping to create high value jobs.
3. Bridging the Digital Divide: Ensuring the plan adapts to the needs of the whole community.
4. Collaboration: Extending the plan beyond our city.

COMMUNITY ENGAGEMENT *(attachment 4)*

This DEP focuses on several outlying communities within Dunedin City.

who we talked to what they said

Outram

- Our community wants faster internet and have already created a petition and engaged with national government (*attachment 5*).
- We consistently have slow connectivity issues hindering businesses operating from home, especially those collaborating and connecting internationally.
- Our businesses, especially those working from home, suffer as they can't compete on the same level as areas that have UFB; video calling is often not possible, expansion online is limited, productivity is low and innovation is difficult.
- Our community wants to connect more closely with the Dunedin CBD and other urban areas around New Zealand.
- We want to attract young families to town but understand they (like us) want a fast internet connection to: further education outside the classroom, access online video streaming entertainment and use online services efficiently.
- Tourists pass through our town daily and we would love to provide them with a world class free WiFi experience.
- UFB will future proof our town for generations to come.

Middlemarch & Strath Taieri

- We are socially isolated and already struggle to access basic online services (e.g. online banking) and entertainment (e.g. Netflix). We don't want to be left behind.
- We have a vibrant tourism industry - the start/end of the Otago Rail Trail and the Taieri Gorge Train - yet we can't offer visitors reliable internet connectivity.
- We realise we won't get UFB, but we can connect and innovate using wireless and 3G/4G technology.
- We have an innovative business community working from home, especially in the agriculture sector. Those operating globally would maximise a faster internet connection.
- We want to use our local school and community centre to be a hub for digital literacy.
- We need faster broadband to enable remote healthcare and improve emergency services.

Waitati & Warrington

- UFB will help future proof our village for generations to come, attracting new businesses and residents.
- Businesses working from home want to innovate using new technology and need the faster connection that UFB enables.
- We want to access and use new technology that needs more bandwidth; we understand and need cloud based services, online video streaming, distance learning and remote healthcare.
- We can't provide free wifi at our Café for tourists and locals - the VDSL connection is too slow for the user base.
- We have a fantastic community hall and library that is widely used, we want to use it to bring our community closer and build digital literacy among all.

Otago Peninsula

- Tourists are frustrated by the lack of internet coverage on the Otago Peninsula. Furthermore, global online connection between the Peninsula and its attractions with our guests and their home countries would enhance the visitor experience by sharing encounters in real time.
- Tourism operators are disadvantaged by insufficient band-width to be able to create innovative global opportunities to promote their attractions and services.
- Many residents are unaware of the opportunity that the increased speed and new online tools provide.
- Home-based business on the Otago Peninsula is on the rise due to the proximity of schools, services and lifestyle opportunities, but it's hampered by unreliable and slow broadband capacity. In the current economic climate we need flexibility and rapid information response to be efficient and competitive.
- Biodiversity and wildlife lies at the heart of the Peninsula and initiatives in habitat restoration and monitoring would benefit from better mobile and broadband connectivity.
- The demand and use of mobile applications is an untapped market for the Otago Peninsula in tourism, recreation, heritage and conservation.
- Rural broadband services need to be expanded to allow coverage for isolated areas of the Peninsula.
- The Peninsula has a high number of secondary school students living on the Peninsula and better broadband access will improve their educational opportunities and accessibility to school resources.
- Better broadband coverage will allow better participation in local government services and consultation.
- Additional commercial opportunities would be enhanced by better quality internet delivery enabling visitors to access more resources, research events & activities and book accommodation and attractions.

Waldronville

- All the suburbs around us have UFB – why don't we?
- We have many online based businesses working from home, many who move a lot of data, we need UFB to work more efficiently.
- We are willing to go door-to-door to help educate and sell UFB packages.
- We have many sports events visiting our suburb and would make use of live online streaming with UFB.
- We have lost our school, and want to use UFB to further our children's education and skills outside the classroom.
- We understand the opportunities of integrating smart technology and want to run some pilot programmes.
- The Southern Scenic Route runs through Waldronville and although Waldronville is not a tourist destination as such many cyclists and tourists pass through as it is the main route south to the Catlins etc. The future national cycleway will also be taking this route.
- The increase in online streaming means many in the community can't access using multiple devices. The more demand there is put on our current service the slower it gets. High Speed Fibre would eliminate this.

OUR PROJECTS & OBJECTIVES

	Est. Date	Location	Technology
LEADERSHIP			
1. Steering Teams Established			
Objective: Oversee and assist the digital plan projects.			
1.1 Community Consultation Through meetings and consultations each community has established what issues they are facing with internet connectivity and what advantages, benefits and opportunities would be created with greater improvement in connectivity.	Complete	ALL	ALL
1.2 Steering Teams Formed Each community has established a steering group of interested individuals to help drive momentum. These groups will be a point of contact within the community for stakeholder engagement and community feedback.	Complete	ALL	ALL
2. Communication & Engagement			
Objective: Engage with key stakeholders to expedite the UFB/RBI/MBSF process and communicate the progress of Digital Plan projects and availability of faster broadband to the relevant communities.			
2.1 Community Plans developed Develop customised digital enablement (<i>attachment 4</i>) and communications plans for each communities needs and aspirations. Key objectives include: - Defining projects outside the scope of this DEP. - Stimulating conversations within the community (online and offline) around the opportunities UFB, RBI and MBSF provide, - Determine channels for updating the community about DEP projects and rollout progress, - Promoting available options; including different ISPs, their services, the plans they are offering and how to access them.	Started	ALL	ALL

Est. Date	Location	Technology
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ECONOMIC DEVELOPMENT

3. Digital Ambassadors Programme for Businesses

Objective: Enable businesses to understand new digital technologies and be more efficient and effective.

3.1 Identify Digital Business Ambassadors

A network of local experts (Digital Ambassadors) will be approached by the steering teams to provide digital advice and guidance to small and medium sized enterprises. These people will have a wide range of skills to offer businesses within their own community.

March
2016

ALL

ALL

3.2 Promote the Digital Business Ambassadors

Digital Business Ambassadors will be published and promoted online for local businesses to contact. The steering team will spread the news to the local community as per comms strategy.

April 2016

ALL

ALL

4. Digital Literacy within Businesses

Objective: Increase business' digital literacy and understanding of the opportunity a faster internet connection provides.

4.1 Digital Journey

Businesses in each community will be offered workshops utilising the Digital Journey assesment tool. The 2 hour informal drop-in session will provide businesses with:

- A Digital Journey assessment,
- A customised action plan with logical next steps to address problem areas,
- Free advice around implementing the action plan.

March
2016

ALL

ALL

4.2 Digital Enablement Training

Formalised half day Digital Enablement Training will upskill a small group of businesses in each community to help:

- Improve digital skills in local businesses,
- Maximise business use of faster internet,
- Help understand new digital technologies and the business efficiencies these provide.

September
2016

ALL

ALL

	Est. Date	Location	Technology
4.3 Gigabit UFB Advice and guidance will be provided to businesses, especially SMEs working from home, on how they can leverage gigabit UFB to create efficiencies and effectiveness within their businesses. Case studies about other SMEs innovation using gigabit UFB internet connections will encourage them to think about how their business could maximize the opportunity.	July 2016	Outram, Waitati, Warrington, Waldronville	UFB
5. Improving Access Objective: Increased access to faster internet speeds for more people.			
5.1 Upgraded Mobile Services Ensuring a reliable 3G and 4G network service for rural Dunedin will help future proof internet connectivity issues. Steering teams will approach mobile service providers in a coordinated fashion to discuss their current issues, and more importantly the appropriate process to resolve the slow mobile coverage they currently face.	August 2016	Middlemarch, Strath Taieri	MOBILE
5.2 Free High Speed Wifi Steering teams will engage the Digital Community Trust and Dunedin City Council around providing free access to fast internet, in turn promoting an innovative environment for more business to take place, and a better tourism experience. <i>Allocation of free high-speed Wi-Fi hotspots in each community is dependent on the availability of options around fibre infrastructure, schools in RBI areas will be considered.</i>	November 2016	ALL	UFB
5.3 Tourism Working with the Regional Tourism Organisation communities will explore the potential to improve tourist experiences using the UFB and RBI networks. Options include: • Interactive tourism information kiosks, • Live streaming roads and attractions, • Free internet connections, • Education of tourism businesses owners.	June 2016	Otago Peninsula, Middlemarch, Outram, Waitati, Warrington	UFB & RBI

Est. Date	Location	Technology
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COMMUNITY ENABLEMENT

6. Community Educational Campaign

Objective: Show the community the opportunities that a faster internet connection could bring them, and point them in the right direction for RSP options to sign up.

6.1 Establish Marketing Plan

Design a marketing plan that describes the most appropriate way to promote UFB and RBI opportunities in each community.

Key objectives include:

- Outlining the different internet options and prices available; including different RSPs, their services, the plans they are offering and how to access them,
- Promoting the benefits and opportunities that are possible with UFB/RBI,
- Providing DEP updates (as per comms strategy).

February
2016

ALL

UFB & RBI

6.2 Community Promotion

Execute the marketing plan to raise awareness of the new UFB and RBI offerings and foster community engagement around the benefits it offers.

Online and offline marketing mediums may include:

- Door to door visits,
- Flyers,
- Notice boards,
- Social Media,
- Community meetings,
- Community notice boards.

TBA

ALL

UFB & RBI

7. Establish A Local Support Programme

Objective: Establish a network of local digital experts and a training location to improve access, digital skills and bring the community closer.

7.1 Community Consultation

Gauge community interest in a digital learning hub and what aspects of learning the community would like to have available.

July 2016

Middlemarch, Waitati,
Outram, Warrington

UFB & RBI

	Est. Date	Location	Technology
7.2 Identify Digital Community Ambassadors Identify and train local, digital experts so they are enabled to teach community members common digital skills, including, but not limited to: • Online safety, • Using online services (e.g. email), • Cloud computing, • Social media.	October 2016	Middlemarch, Waitati, Outram, Warrington	UFB & RBI
7.3 Community Learning Hub Establish a community training location with an Internet connection that that can be used by the public to learn and practice their digital skills. This community learning hub is a physical location for training and troubleshooting to take place.	October 2016	Middlemarch, Waitati, Outram, Warrington	UFB & RBI
8. Service Areas With Limited Or No Broadband Objective: Supplying faster and more reliable internet to rural residents			
8.1 Targeted Wireless Service Investigate the idea of working with an RSP to provide a high speed targeted wireless service, using a UFB backbone, to households that don't have reliable broadband.	August 2016	Middlemarch, Waitati, Outram, Warrington	UFB
8.2 Talk to Local School Explore the opportunity of leveraging local schools as Digital Hubs - using their fibre connection to support those in the community who do not have a fibre connection. <i>Each community will assess whether this is a suitable option and go through due process with Ministry of Education.</i>	August 2016	Otago Peninsula, Outram, Waitati, Warrington, Middlemarch	Fibre in Schools

	Est. Date	Location	Technology
1. Utilise Smart Technology			
Objective: Incorporate smart technology into the community			
1.1 Smart metering Initiate discussions with interested parties about the opportunities smart technologies provide the community, and using Waldronville and Otago Peninsula as possible test cases or pilots. Some projects may include metering the water at Waldronville estuary and/or smart bus stops.	TBA	Waldronville, Otago Peninsula	ALL
EDUCATION			
2. Education Through UFB			
Objective: Leverage the education opportunities that the UFB infrastructure provides			
10.1 Organise and run a local Code Club Run a one-off code club for youth in the community to establish if there is interest and an appetite for ongoing events and learning practice.	December 2016	Waldronville, Outram	UFB
10.2 Distance Learning Educational campaign to maximise distant learning for school and tertiary training. Maintaining opportunity for all in our community to further their education to benefit their own and the community's future.	May 2016	Waitati, Warrington, Waldronville	UFB

RESOURCING AND FINANCIAL SUPPORT

Due to the synergies between this plan and existing strategies, the resourcing and funding required to deliver this DEP could be a mix of funding sources such as; Gigatown community fund, local community funding, business funding, local Government funding, central Government funding and community trust funding.

Enterprise Dunedin (ED), which includes the city's Economic Development team, will oversee the Digital Enablement Plan from a City perspective. ED will provide a key point of contact for the steering teams and be able to connect relevant stakeholders.

CONTACT

For all enquireies around this DEP please contact:

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027 2784132

ATTACHMENT 1



Dunedin Digital Strategy

2010 to 2013

Dunedin Digital Strategy 2010 to 2013



SECTION ONE: FAST TRACK

How to read this document

This is **Section One** of the Dunedin Digital Strategy

There are four sections within the Strategy. Each section builds upon the previous section to provide a detailed report on the digital opportunity, strategy and implementation plan.



You are here

SECTION ONE – FAST TRACK

An overview of the Dunedin Digital Strategy from start to finish.

This document summarises Sections Two to Four.

SECTION TWO – THE OPPORTUNITY

The key opportunities for visitors, residents, businesses and students across the four key strategic themes of: connection, content, capability and confidence.

SECTION THREE – THE STRATEGY

The Dunedin Digital Strategy.

The strategic vision and goals and the projects required to deliver the Digital Strategy.

SECTION FOUR – THE PLAN

Recommends an action plan to implement the Dunedin Digital Strategy.

Includes recommendations on which projects should start first, who should lead them and who should be involved.

Strategy prepared by: Stuart Dillon-Roberts

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The 'tag cloud' image on the front cover of this report records many of the key words raised during the Dunedin Digital Strategy consultation

1 FOREWORD FROM THE DIGITAL STRATEGY STEERING TEAM

In its relatively short life, Dunedin has developed as a city offering a fulfilling and convenient lifestyle, excellent educational facilities, wonderful recreational opportunities and a varied environment hosting a range of native wildlife. But Dunedin is far from the world's centres of population and commercial, financial and political influence. It also has a huge, mostly rural, geographic footprint. Distance has long been an issue for Dunedin and conquering the tyranny of distance has long been the key to engaging in commerce and communication.

In the 19th century the answer lay in railways and shipping. In the twentieth century motorways and air travel shrank distance. As cheap energy is depleted in the twenty-first century, distance is increasingly being conquered by digital communication technology: largely high-speed fibre optic broadband.

It is imperative for Dunedin's well-being and development that our community has access to modern and rapidly expanding, digital communication technology. It is essential infrastructure; as important as roads, drains and water supply systems.

It is not only communication. Within a few short years, more education and health services and a wide range of commercial services will be delivered by digital technologies; sometimes exclusively. Digital technologies will become the de facto transportation systems as well as essential communications media.

Digital communication technology is not just about laying fibre optic cable beneath the city's streets and along rural roads. It is promoting their use by the community and ensuring digital services are accessible and affordable. It is ensuring that appropriate products and services are available.

That is why the Council has developed a strategy to best equip the whole of our community with current and future digital technology opportunities. The strategy is an action plan, not just a statement of issues and needs.

The strategy is not solely Council focussed. It aims to enhance the whole of Dunedin and the surrounding region's digital communication capacity. It addresses the needs and concerns of all sectors. That is why the Digital Strategy Steering Team set up by the Dunedin City Council (DCC), includes representatives from health and IT business sectors, education, the Community Trust and the DCC's infrastructure provider - Aurora. During the consultation process, the Digital Strategy Steering Team sought input from across the community. That wide canvassing of ideas and aspirations regarding the digital communication sector, contributed enormous value to the final strategy.

Councillor Dave Cull

Chairman of the Dunedin Digital Strategy Steering Team

2 DUNEDIN DIGITAL STRATEGY EXECUTIVE SUMMARY

This is the city's first Digital Strategy. It has been created through community consultation, research and with guidance from a Digital Strategy Steering Team.

The Dunedin Digital Strategy is aligned with the government's Digital Strategy for New Zealand. This strategy has a vision for using digital technology to create a sustainable, prosperous and vibrant society. The strategy is structured around four key themes:

1. **Connection:** "What is needed to access digital services?"
2. **Content:** "What information should be available?"
3. **Capability:** "How do we gain the necessary skills to use technology effectively?"
4. **Confidence:** "How do we raise confidence in using digital technology?"

These themes are referred to throughout the Dunedin Digital Strategy.

The Dunedin Digital Strategy has a clear focus to ***'review what digital services are available today, understand the digital needs across the community and develop a digital vision for the city in the future'***.

2.1 Consultation

An extensive consultation process was run across the community, city businesses, key stakeholders, students, visitors and technology providers. It included surveys, workshops, presentations, public meetings and a formal submissions hearings process.

With reference to the government's themes of content, confidence, capability and connection (the four Cs) the results from the consultation workshops and survey are summarised in the tables below:

Connection <i>"Access to Digital Services"</i>	What you said: - Many businesses, community group and schools are not serviced by fast, high quality digital networks across the city. - There is poor service when connecting to digital networks in the more rural parts of the city. - There are unnecessary delays when implementing digital networks due to Council processes. There is no preparation undertaken to assist digital installations in the future. - Digital networks are expensive to access and not easy to connect to. - There is a growing expectation from tourists and visitors that access to digital services should be available and at no cost. Survey Results: 78% of those who responded to the survey reported poor access to digital networks in the rural part of the city. - Across the city only 40% of Dunedin residents are happy with their access to digital services.
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Content “digital information”

What you said:

- We need to deliver more online services for the community and visitors to the city to access.
- We are not doing enough to attract or retain the digital businesses (for example IT, software development or consultancy businesses) in our city.
- The digital businesses that create new online content need help to grow and prosper.

Survey Results:

- 70% of attendees at the digital strategy workshops reported that they wish to see more Council services available online.
- Only 34% of those who responded to the survey believe that Dunedin is at the forefront of creating digital content and innovation.

Capability “skills to use digital services”

What you said:

- Schools in the city have poor access to digital networks and for some, limited access to digital technology (for example computers, interactive whiteboards or mobile devices). Many families have no access to computers at home.
- There are limited options for our community groups, particularly youth groups, to access high-tech digital technology.
- There is a low level of digital literacy across the community with many not understanding what digital services are available and the benefits.
- Many businesses and sectors, like the not-for-profit sector, have limited capability to fully participate in digital services.

Survey Results:

- 27% of those who responded to the online survey have limited capability to use digital technology.

Confidence “confidence to use digital technology”

What you said:

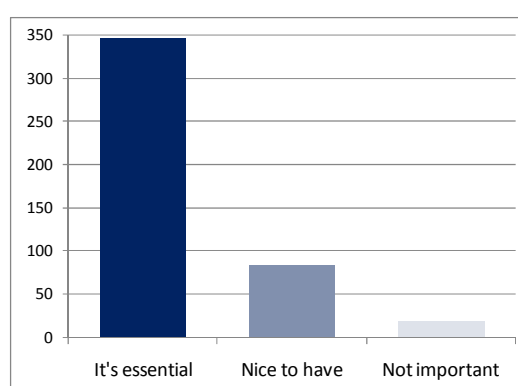
- There is a lack of confidence using digital services and an unwillingness to fully participate in digital technology due to risks.
- There is no advice available to residents to help them connect to digital services and use them safely.

Survey Results:

- Only 34% of those who responded to the online survey have confidence and trust in digital services.

The consultation process emphasised the importance of developing the Digital Strategy. This was further supported by the survey results; across the 450 respondents who completed the survey there was overwhelming support for the development of a digital strategy (as per the graph on the right).

It was acknowledged that this strategy is essential; if the city does not address these needs we will fall further behind the rest of the country, denying our community access to essential services within an increasingly connected society and negatively impacting our economic growth. Connection to a fast, high quality digital network isn't a luxury. It is



an essential part of our infrastructure as a city and needs to be considered in the same way as roads, sewage and water.

It is important to see beyond the immediate business case and consider the digital opportunities that can be enabled by a connected city. The opportunities of a video empowered education service for our rural schools, a health sector that connects patients to online services and a business sector that fully utilises the power of digital services to work internationally. These examples illustrate what can be achieved with a connected city. However no one can predict what we will do with digital services in the future. What we do know is that communities which do not embrace technology will languish on the wrong side of the digital divide.

The need has never been greater for the city to define a Digital Strategy to fully embrace the social, economic and cultural opportunities of digital services.

***Section Two** of the Dunedin Digital Strategy reviews the consultation results and opportunities raised during the initial consultation process.*

2.2 Dunedin Digital Strategy

The Digital Strategy vision is to create “**Digital Dunedin**”. This will be achieved through the leadership, commitment and support of the following strategic goals:

- 1. A Digitally Connected City to increase the access, affordability and the quality of digital networks connecting the residents and businesses across the city.**
- 2. A Digitally Enabled City to deliver more digital content to the community, visitors and businesses across the city and develop Dunedin as a centre for digital innovation.**
- 3. A Digitally Capable City to raise the level of knowledge, literacy and skills to use digital technology across the community, business and service sectors.**
- 4. A Digitally Confident City to increase assurance that digital services are safe and reliable for residents to fully embrace and participate in.**

As part of this bold vision for our city the following strategic projects and leaderships groups are recommended:

2.2.1 Strategic Leadership

Establish specific advisory groups to lead the development of digital networks across the city and digital innovation projects. These advisory groups will consist of representatives from the community and businesses across the city with the support and leadership from the Council. The roles of these advisory groups are summarised in the table below:

Digital Dunedin Advisory Groups	Advisory Groups	Role and Targets
	Digital Network	- Lead discussions with government and commercial agencies to advance digital networks across the city and address the poor access reported during the consultation. Currently 40% of residents surveyed reported that they had acceptable access to digital networks. Target is to increase this to 75% by 2016¹. - Lead a project to review the options available to connect the more rural parts of the city to fast, high quality digital networks and improve the digital service to these communities and businesses. Currently 22% of residents surveyed report acceptable access to digital networks in the more rural parts of the city. Target is to provide fast broadband to 97% of rural residents by 2016². - Lobby for improved international access for the country to ensure the city is serviced well in the future. <i>More details can be found in Appendix A, section 4.1</i>
	Digital Innovation	- Lead the development and growth of digital innovation across the city. Through consultation agree on initiatives to retain and attract new digital businesses (for example: IT, software development, consultancy companies) to the city. Currently 34% of those surveyed believe Dunedin is a centre for digital innovation. Target is to increase this to 65% by 2014 through initiatives led by this advisory group and by collaborating with organisations in the city, like the University and Polytechnic. - Create an environment that is supportive of digital innovation to make it easier for new digital businesses to start. This may include providing educational and mentoring services to guide business growth and access to technology to kick start new ideas. Target to increase the technology GDP by 20% by 2014³. <i>More details can be found in Appendix A, section 4.2</i>

2.2.2 Highest Priority Strategic Projects

The following table summarises the highest priority strategic projects for each of the strategic goals within the Dunedin Digital Strategy:

A Digitally Connected City	- Implement wireless (wifi) networks to improve accessibility to digital networks and provide a service for the community and visitors to the city. Review options to provide this service at no cost for a period of time to address the affordability concerns raised during the consultation. Target for 100% of central Dunedin city (from Port Chalmers to Dunedin Airport) and 6 rural communities to have access to wireless services by 2012. - Remove any impediments for installing digital networks across the city and prepare the city for new digital services in the future. Target to define digital infrastructure standards and an active programme of work to install network infrastructure across the city. <i>More details can be found in Appendix A, section 4.1</i>
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¹ The Government's target is to provide ultra-fast broadband to 75% of New Zealanders by 2020; Dunedin Digital Strategy's target is to achieve this by 2016.

² This is in alignment with the Government target of 97% of rural households to be connected to broadband services over the next 6 years.

³ This target is to be agreed by the Economic Development Unit at the Council and measured through the BERL report.

A Digitally Enabled City

- Increase the Council services available online to the community and provide new digital services to communicate and engage with the community. Target to increase Council online content by 50% by 2012 with a focus on online payments, social networking services, e-democracy and online forms.
- Have in place 'Dunedin City Portal' to provide an online service for the community which will promote activities and attractions in the city, centralise community and student information, promote business opportunities and provide a one-stop-shop for city information. Currently these services operate independently and the target is to have a single portal established by 2011 and integrated into the central city wifi network.

More details can be found in Appendix A, section 4.2

A Digitally Capable City

- Improve the access schools have to digital networks and increase the digital resources available in schools to raise digital capability across school-age children. Currently many schools report limited technology resources. Target is to provide a minimum of 100 digital devices (for example: computers, interactive whiteboards and mobile devices) to local schools through recycling business computers, sponsorship and technology grants.
- Implement a community based "Computer Club House" to provide access to digital technology and particularly empower youth from all backgrounds to become more capable, creative and confident learners. Target to have Computer Club House, or similar initiative, operating by 2013.
- Appoint "Digital Ambassadors" within the city to provide advice and guidance on digital services and to raise capability across the sectors that need it most. Currently 27% of residents surveyed report that they have limited capability to use digital services. The target is to reduce this figure to less than 15% by 2014 with the Technology Ambassador role operating by 2011.
- Raise the level of digital literacy across the community and raise the level of skill and knowledge in digital services. The target is to have a literacy programme operating by 2012.

More details can be found in Appendix A, section 4.3

A Digitally Confident City

- Launch an educational campaign to promote the safe use of digital technology and provide best practice advice for connecting, using and participating in digital services. Work closely with community groups to understand the risks and work together to raise digital confidence across the city. Target is to have the educational campaign operating during 2011.
- Establish a city-wide digital help desk service to provide a point of contact for guidance on connecting and safely using digital services. Currently only 34% of residents surveyed confidently use digital services. The target is to increase this to 60% by 2014 and have the help desk service operating early 2012.

More details can be found in Appendix A, section 4.4

Section Three of the Dunedin Digital Strategy describes in more detail the strategic projects recommended to deliver the Digital Strategy vision and goals.

2.3 The Future

The Digital Strategy has a bold vision to create a “Digital Dunedin” through strong leadership and commitment to the strategic projects outlined. This is a community driven strategy that has been guided by the inputs received during the consultation process.

But the inevitable question, as a ratepayer, business owner or a visitor to the city, is how will this strategy help me?

For a member of the Community?	For a Business in the City?	For a visitor to the City?
A fast digital network from your home and the opportunity to fully participate in digital services across the entire city Freedom to access digital services from a portable or mobile device via the central city wireless network, from 2011 onwards Easier ways to engage with the DCC community services through online and social networking services Guidance on the safe use of digital technology with support and advice from the city digital help desk Greater access to digital technology at schools and community groups Free advice to community groups on the best use of digital technology A Computer Club House established to provide access to the latest technology for those members of the community who have little opportunity at present	Fast digital networks to your business offer an opportunity to embrace new digital services and access a truly international market Access to Digital Ambassadors who provide impartial advice on how to participate in a digitally connected market Access to educational services and mentoring to grow your digital business Access to technologies to help kick start new digital businesses Freedom to conduct your business from home or at a location that suits you through the central city wireless service, from 2011 onwards	Free access to a central city wireless network to connect to the internet and access digital services when visiting the city When you arrive by boat at Port Chalmers or by plane at Dunedin Airport, you will have access to digital services to check emails, upload pictures or browse the internet Free access to the Dunedin City Portal to find out more about the cities attractions and book tickets online Help with connecting to digital services when you are in town through the city digital help desk service

In addition, developing digital services also supports the Dunedin Community Outcomes as defined within the Long Term Council Community Plan (LTCCP). The alignment and benefits with the LTCCP are summarised in the table below:

2.3.1 LTCCP Alignment

LTCCP Outcome	Digital Strategy Alignment
Wealthy Community: a city that enables strong local business growth and employment growth, and attracts increasing numbers of new businesses and tourists.	- Supporting economic growth across the city through companies that rely on or develop digital services. - Attracting and retaining skilled digital staff within the city. - Increasing the attractiveness of visiting Dunedin through the availability of digital services, particularly the free wireless network operating in the central city.
Supportive Community: a city where residents feel included and connected with their wider community.	- Connecting the community to each other through digital services. - Access to community assets like the Computer Club House to socially meet and experience digital technology.
Accessible City: A city where residents interact freely through the city's reliable and professional transport and telecommunications systems.	A robust digital infrastructure that is fast, affordable and accessible across the community.

2.4 Recommended Action Plan

There is no doubt that the city needs a Digital Strategy and the residents, visitors, community groups and business owners who participated during the consultation process are looking for action. They demonstrated a sense of urgency for these projects to start and both encouragement and willingness to support the implementation of the strategy. But most of all there was a high level of expectation from those consulted that this needs to happen for the wealth, diversity and growth of our city into the future. The strategy is ambitious with a number of projects and leadership groups identified. To be successful the leadership of the Digital Strategy projects will require assistance from the community, businesses, academic institutions and other interested parties along the way. Collaboration and community consultation are key messages that have been raised throughout the consultation and the implementation process needs to continue to involve members of the community and use their knowledge, skills and support to deliver the strategic goals.

A recommended implementation plan has been described within Section Four. It is recommended that the Digital Strategy projects are grouped into four work streams: *Leadership*, *Enabling*, *Capability* and *Confidence*. An overview of each work stream, the projects within each work stream and who is recommended to lead and contribute to each project is shown in Appendix B. As yet, there is no committed funding for the Digital Strategy. Further work is required to define how the projects will be funded and what opportunities there are both locally and nationally to support the strategy.

There was strong support for many of these projects to start promptly. This has been acknowledged and the work streams are prioritised accordingly with the *Enabling* work stream being the highest priority. An overview of the work streams and the recommended start date for each work stream is shown in Appendix C.

Section Four describes a recommended implementation plan for the Dunedin Digital Strategy. It also provides a recommendation on who should be consulted and involved in the leadership of the projects and advisory groups.

3 IN CONCLUSION

The Dunedin Digital Strategy has been developed in consideration of the comments raised during the consultation process. During the consultation we listened to the comments made and didn't develop a strategy that was solely focussed on laying more fibre optic cable or promoting a particular digital technology. But rather a strategy that will deliver benefits across all of the four Cs: connection, content, confidence and capability as the graphical insert demonstrates.

There was strong support across the community for the Digital Strategy, with a high level of participation in the public meetings, online survey and submissions process. The comments raised have been instrumental in the development of the strategic projects and leadership groups. But it is expected that the high level of community support will continue.

The implementation process will rely on community participation to guide how projects are implemented and ultimately the success of the strategy.

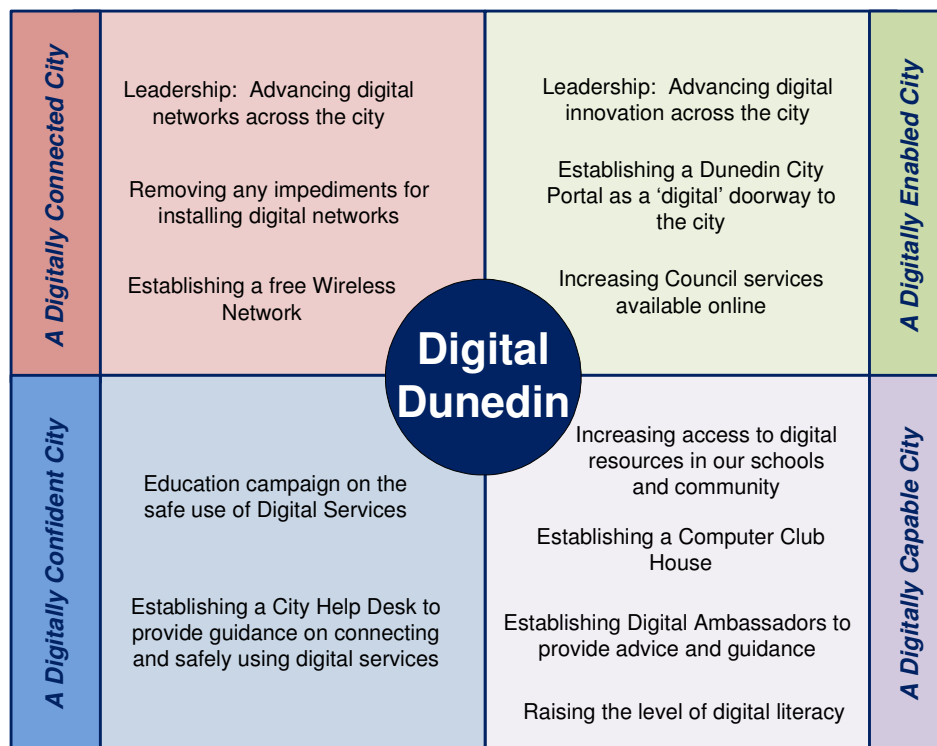
The implementation process will rely on community participation to guide how projects are implemented and ultimately the success of the strategy.

participation to guide how projects are implemented and ultimately the success of the strategy.

In its entirety this strategy is focussed to bring social, economic and financial benefits across the community and businesses in the city. We believe the strategy has the right balance of projects and initiatives to deliver benefits across all of the four Cs.

Finally, the vision is to create a connected city that provides digital services to bring wealth and social benefits to the city. For the benefit of the community, schools, our economic growth and the future generations the implementation of this Digital Strategy is essential.

Let's create a "Digital Dunedin".



This is the end of Section One.

Section Two is 'The Opportunity'.

The key opportunities for visitors, residents, businesses and students across the four key strategic themes of: connection, content, capability and confidence.

4 APPENDIX A: FAST TRACK THE SUPPORTING DATA

The tables in Appendix A are divided into the four goals of the Dunedin Digital Strategy and summarise the key strategic projects.

They provide a high level overview of the project, key outcomes, estimated costs, priorities and recommended leadership.

Key:

1	Project Reference. This reference is used throughout the Digital Strategy to identify each strategic project. They are colour coded to reflect the four strategic themes of connection, content, capability and confidence.				
\$	Estimated Costs Column Estimated costs are broken down into four categories: <table><tr><td>Less than \$50,000</td></tr><tr><td>Between \$50,000 to \$100,000</td></tr><tr><td>Between \$100,000 to \$500,000</td></tr><tr><td>Greater than \$500,000</td></tr></table> These financial estimates have been made following consultation with technology providers and through comparison to similar projects. These costs are for guidance only and it is acknowledged that further work is required to define the costs of the projects and potential sources of funding in more detail. This work will be completed following the endorsement of the Digital Strategy and work commences on the implementation stage.	Less than \$50,000	Between \$50,000 to \$100,000	Between \$100,000 to \$500,000	Greater than \$500,000
Less than \$50,000					
Between \$50,000 to \$100,000					
Between \$100,000 to \$500,000					
Greater than \$500,000					

4.1 A Digitally Connected City

Goal: *A Digitally Connected City to increase the access, affordability and the quality of digital networks connecting the residents and businesses across the city.*

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
1	Digital Networks Advisory Group	- Lead discussions with government and commercial agencies to advance fast, high quality, digital networks across the city. Influence the implementation of digital networking to those businesses, schools and communities that need it most. - Lead a project to determine how digital networks can be delivered to the rural parts of the city. Review the opportunity for sharing the costs for the installation through partnerships with commercial vendors and/or joint ventures with other Councils that border the city. - Be transparent and inform residents and businesses of connectivity progress across the city and any forthcoming developments. - Lobby for improving international Internet access to the country to ensure the city is serviced well in the future.	40% of residents report acceptable access to digital networks at home. 22% of rural community residents report acceptable access to digital networks.	75% of residents reporting acceptable access to digital networks at home by 2016 (improving on the government's target of 2020). - Align with government target of 75% of city having access to Ultra Fast Broadband and the target of 97% of rural households to be connected to broadband services by 2016⁴. - Annual survey of satisfaction and publication of digital network development across the city.	From \$50,000 to \$500,000 ⁵
2	Digital Roadblocks	Goal1: The Council to provide leadership in establishing the digital infrastructure needs of the City through: - Identifying the digital infrastructure standards necessary for the City; - Preparing a 'digital infrastructure map' of the city to show where the digital infrastructure (like fibre ducting) has been installed across the city and make this information available to all commercial vendors; - Identifying where that digital infrastructure is required to support digital networks in the future; Goal 2: The Council to deliver mechanisms for facilitating the installation of digital infrastructure through: - Including networking infrastructure in the code of subdivision and district plans to prepare 'green field' sites and support faster implementation of digital networks; - Defining standards and installing network infrastructure as part of the continuing and scheduled programme of work at the Council (e.g. Roading, water and waste);	Consultation indicated that there is no preparation work undertaken at present.	- Standards defined by end of 2010. - Council working party established with a target of including digital networking standards within the Council programme of work early 2011. 75% of green field sites prepared for digital services by 2011	Between \$100,000 to \$500,000

⁴ Government target. Source: Ministry of Economic Development broadband investment target.

⁵ Estimated costs are for the operation of the advisory group to complete feasibility reviews and lobbying. If the government initiatives are not forthcoming then the financial estimate will increase significantly to complete the targets identified.

DIGITAL DUNEDIN – IMAGINE OUR CITY

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
3	Dunedin Wireless Network	- Implement a wireless service (wifi) across the city and outlying suburbs to improve the accessibility to digital networks. - Project will consider the opportunity for partnerships with current wireless providers to achieve a wide as possible coverage across the city. Project will also review the most suitable technology to use to provide a high quality and consistent service to the community and visitors to the city. - Project to assess how a “free service” can be provided. This may identify that free services are provided for a period of time or within a restricted data download limit. To exceed these limits charges may apply presenting an opportunity to offset the costs for the service.	20% of central city serviced with commercial wifi providers at present.	100% of central Dunedin city (from Port Chalmers to Dunedin Airport) to have access to wireless services by 2012. 6 outlying suburbs to have access to wireless services by 2012 with a programme of work extending this figure to 10 by 2014. Which location to be decided through ongoing consultation and the availability of backhaul access.	Between \$100,000 to \$500,000

4.2 A Digitally Enabled City

A **Digitally Enabled City** which will deliver more digital content to the community, visitors and businesses across the city and develop Dunedin as a centre of digital innovation.

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
4	Digital Innovation Advisory Group	Lead initiatives that will provide economic value to the city and develop Dunedin as a centre for innovation. To include initiatives to: - Retain digital businesses in the city - Attract new digital businesses to the city by promoting the cities strengths - Work with our sister city on digital innovation opportunities - Provide services (like mentoring) to assist new digital businesses - Support the Council’s Economic Development Unit (EDU) projects like ICT internships, technology precinct and other initiatives within the city - Provide access to technology (like free internet access or data centre hosting) to kick start new digital businesses	34% report Dunedin is a centre for innovation. - Isolated services available to assist digital start up businesses.	- Increase to 65% of residents reporting Dunedin as a centre for innovation by 2013. - Increase technology GDP by 20% by 2014 as measured by the BERL report⁶.	Up to \$50,000 ⁷

⁶ BERL report assesses the economic value of sectors within Dunedin. The target to increase by 20% will be agreed with the Economic Development Unit at the Council.

⁷ Estimated costs are for the operating costs of the advisory group. Any initiatives that this group recommend will require separate funding.

DIGITAL DUNEDIN – IMAGINE OUR CITY

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
5	Dunedin Online	Increase the online services available to the community, visitors and businesses across the city. Project to include: - Increasing Councils services available online to the community with a focus on online payments, RSS feeds, social networking services and online forms. - Increased transparency of Council information and processes available to the community including reviewing how eDemocracy⁸ can be used to build stronger relationships between the community and Council. - Providing online content to support the Dunedin City portal.	- Limited online services currently available. 70% wish to see more online Council services.	- Increase online content by 50% by 2012. - Annual review of what services the community wish to see. - Increased transparency on Council information.	Up to \$50,000
6	Dunedin City Portal	The aims of the Dunedin City portal are: - Integrate information across separate online websites within a single entity. This includes information for students, businesses, visitors and the community. - Support the brand 'Dunedin' by creating a one-stop-shop for city information. - Improve the promotion of the city and increase visibility of city events and community services. - Showcase digital innovation across the city through a dynamic and stimulating digital service whilst also informing the community on what digital services are available.	No service available	- Portal operating and integrated to central city wireless network by 2011. - Annual review to assess services provided by the portal and what services the community wish to see in the future.	Between \$50,000 to \$100,000

4.3 A Digitally Capable City

A Digitally Capable City to raise the level of knowledge, literacy and skills to use digital technology across the community, business and service sectors

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
7	Digital Technology	Increase the number of digital devices available across the community and at schools. Initiatives include: - Establishing a 'computer in home initiative' to provide computers to disadvantaged families or community groups that have no access to computers at present. This includes providing training and assistance to use the computers well. - Creating an active partnership with commercial vendors to sponsor technology within a school or community group. This may be in the form of computer hardware, interactive white boards or services to access the internet.	Limited access to digital technology across schools and community members.	- Provide a minimum of 100 digital devices per year to those schools and families that need assistance from 2011. - Encourage the use of open source software to reduce technology costs. - Encourage more re-use and recycling of digital devices.	Between \$100,000 and \$500,000

⁸ eDemocracy refers using digital services for political and governance processes.

DIGITAL DUNEDIN – IMAGINE OUR CITY

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
		- Seek grants to purchase, upgrade or maintain digital technology. - Establish a computer broker service to allow businesses or individuals that no longer required a computer to donate this to school or a family that is in need. Project also to include initiatives to: - Increase awareness on open source software and benefits to the community as an alternative to reduce technology costs. Support the development of a Dunedin Open Source repository and distribution media (e.g. DVD). - Promote initiatives to encourage the recycling and re-using of digital technology across the community, schools and business sectors.			
8	Computer Club House	Establish a community based Computer Club House to provide access to digital technology to members of the community who have little exposure at present. Project to focus on building capability across youth sector but it is also recognised that the club house will need to consider pre-schoolers and retired age groups. Project to review; - Financial investment required establishing a Computer Club House and the ongoing financial support required. - Opportunities for sponsorship both locally and nationally. - Location of Club House or Club Houses, for example: Dunedin City Library, Community Learning Centre or at a school. - Review of other Club Houses operating in NZ and overseas and what makes them successful. - What digital services (for example building robots or making a video recording) could be offered and what skills are available locally to assist with the project.	Limited community services focussed on building capability across digital technology and digital services.	Target to have a Computer Club House (or similar initiative) operating by 2013.	Greater than \$500,000
9	Digital Ambassadors	Project to establish a Digital Ambassadors scheme to provide impartial advice to improve the digital capability across community, not-for-profit groups and small business sectors. Project to review: - Financial support required for the scheme to operate and the ongoing financial support required. - Identify who will commit to support this service across the academic and professional ICT bodies in the city. - Identify a location and operating model to be followed (potentially based on the community law principles).	27% of residents report no capability to access digital services.	50% improvement in capability across the city to reduce the current target to 15% by 2013. - Digital Ambassador initiative operating by 2011.	Between \$100,000 to \$500,000

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
		Review how this initiative could be linked to the Computer Club House project described in ref 8 and other digital services discussed in this strategy.			
10	Digital Literacy	Project to raise the level of digital literacy across the community by providing practical examples of how digital services can benefit the community. Also to encourage the digital literacy services currently operating in the city. Project will review: - Opportunities to promote the current digital literacy initiatives in the city to increase the skills in understanding, creating and using digital services. - Methods to develop 'practical' examples of how digital services can help the community (create the need to participate in digital networks). - Collaborate with other professional bodies on delivering digital literacy programmes for the community. - Review how this initiative could be linked to the Computer Club House project described in Project Ref 8 and other digital services discussed in this strategy.	Isolated digital literacy programme operating in the city.	Target to have a digital literacy programme operating (and integrated within other Digital Strategy projects) by 2012.	Between \$50,000 and \$100,000

4.4 A Digitally Confident City

A Digitally Confident City to increase assurance that digital services are safe and reliable for residents to fully embrace and participate in.

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
11	Digital Safe Use Campaign	Project to promote the safe participation in digital services and raise digital confidence across the city. Project will lead a 'Digital Safe Use Campaign' to advise on the safe practices for connecting, using and participating in digital services. Input from community groups and law enforcement agencies will drive what content is to be delivered to reflect the concerns of parents, community leaders and educational professionals. Project will review: - Current risks when using digital services and what issues the community, parents and businesses are concerned about. - Mechanisms available to promote safe practices, for example: online advisory services, publications and events. - Ongoing financial commitment for promoting digital safe use on an annual basis. - Review what services are currently operating and opportunity for collaboration on digital safe use campaigns.	34% have confidence and trust in digital services.	Increase confidence across city to 60% by 2012.	Between \$50,000 and \$100,000

DIGITAL DUNEDIN – IMAGINE OUR CITY

Proj. Ref	Project	Project Goals	Current Target	Future Target	Est \$
12	Digital Help Desk	Project to increase the community's confidence in accessing and using digital services. The Council's Customer Services Agency help desk is ideally suited to provide this service responding to requests for assistance by phone, through email and in person. The goal is to support the community by providing a Digital Help Desk service that will provide: • Advice on best practices to be followed when using digital services. • Advice on community based courses to attend (Project Ref 10). • Guidance on how to access Council digital networks (like the wireless network discussed in Project Ref 3). • Point of contact that visitors can use to enquire about digital services in the city; • Advice on e-recycling of digital technology. • Promoting Dunedin ICT businesses that can assist with digital services. Project will review: • What is required to establish a Digital Help Desk to operate through the Council's Customer Services Agency. • Reviewing what information is required and from what sources to support the Help Desk role. • Reviewing training requirements for Customer Services Agency staff.	34% have confidence and trust in digital services.	Increase confidence across city to 60% by 2012.	Up to \$50,000

Section Three of the Dunedin Digital Strategy describes in more detail the strategic projects recommended to deliver the Digital Strategy vision and goals.

5 APPENDIX B: RECOMMENDED PROJECT WORK STREAMS

Work Stream	Proj. Ref	4 Cs	Est. Times	Lead Agency	Recommended Contributors	Project Description
Leadership	1	Connection	- Late 2010 Advisory Group formed and operating - Annual publication on work stream progress starting in 2011	Dunedin Digital Office or Dunedin Digital Trust	- Community groups in city - Technology providers (as required) - Business and Education sectors - Rural community group member - Rural connection project to include Taieri Gorge Member when discussing the use of rail corridor - Other Councils or funding bodies (as required) - Specialists as necessary (e.g. KAREN, NEN advisors)	Digital Networks Advisory Group; established to lead discussions on improving digital network in the city and access international digital networking
	4	Content	- Late 2010 Advisory Group operating 2011 initiatives agreed and implementation starts - Annual publication on digital innovation progress across the city starting in 2011	Dunedin Digital Office or Dunedin Digital Trust	- University and Polytechnic representative - Distiller representative - Community and business representatives - Chamber of Commerce representative	Digital Innovation Advisory Group; established to lead initiatives that will provide economic benefit to the city.
Enabling	2	Connection	- Late 2010 project team to lead review operating 2011 implementation starts	Goal 1 : Council through General Manager Customer Services Goal 2: Council through General Manager City Environment and General Manager Strategy and Development	- Technology providers to be consulted - Benchmark against other Councils - Specialists in digital infrastructure - Crown Fibre Holding	Digital Roadblocks; project to prepare the city by identifying where digital infrastructure is required for future digital networks.
	5	Content	2010 project team formed - Implementation starts 2010	Council through General Manager Customer Services	- Consult with community on which services are the priority - Benchmark against other Councils - Library Representative	Dunedin Online; project to increase the online services provided by the Council to the community, visitors and businesses across the city.

DIGITAL DUNEDIN – IMAGINE OUR CITY

Work Stream	Proj. Ref	4 Cs	Est. Times	Lead Agency	Recommended Contributors	Project Description
	3	Connection	- Late 2010 project team established 2010-2011 implementation starts - Early 2011 decision on free access agreed	Dunedin Digital Office or Dunedin Digital Trust	- Community groups in city - Commercial vendors and academic institutions (as required) who provide wireless services at present - Tourism sector - Specialist Technology Advice (as required) to support the decision on what technology to use (e.g. WiMax)	Dunedin Wireless Network; implement a wireless service (wifi) across the central city and outlining suburbs to improve accessibility to digital networks across the City.
	6	Content	- Late 2010 project team formed 2011 portal developed and implemented and integrated with Dunedin Wireless Network	Council through the General Manager Strategy and Development	- Tourism Dunedin and Tourism representative - i-site team to represent visitors interests - Council: BIS and Marketing Activity Area representative - Community Groups - University and Polytechnic - Library Representative - DVML representative	Dunedin City Portal; Establish a Dunedin City Portal to integrate information across separate online websites within a single entity. This includes information for students, businesses, visitors and the community.
Capability	7	Capable	- Early 2011 project team formed - Late 2011 implementation starts	Dunedin Digital Office or Dunedin Digital Trust	- Education representatives to assist with project - Businesses to review partnerships opportunities - Community Trust representative - Computers in Home scheme representative in Dunedin - Cargill Enterprises regarding discussions on re-using and recycling projects	Digital Technology; project to increase the number of digital devices available across the community, families and at schools. Promote open source solutions and re-using/recycling of technology.
	8	Capable	2011 project team to lead review operating 2012 decision on viability made 2012-2013 - Computer Club implementation starts	Dunedin Digital Office or Dunedin Digital Trust	- Advice from Computer Club House NZ - Community groups to assess needs - University and Polytechnic representatives - Library member - Community Trust representative	Computer Club House; establish a community based Computer Club House (or similar initiative) to provide access to digital technology to members of the community who have little exposure at present.
	9	Capable	2011 project review underway and decision on service made - Late 2011 service begins operating	Dunedin Digital Office or Dunedin Digital Trust	- Community Trusts representative - University and Polytechnic representatives - Specialist Advice	Digital Ambassadors; to improve digital capability across community, not for profit and small businesses sectors

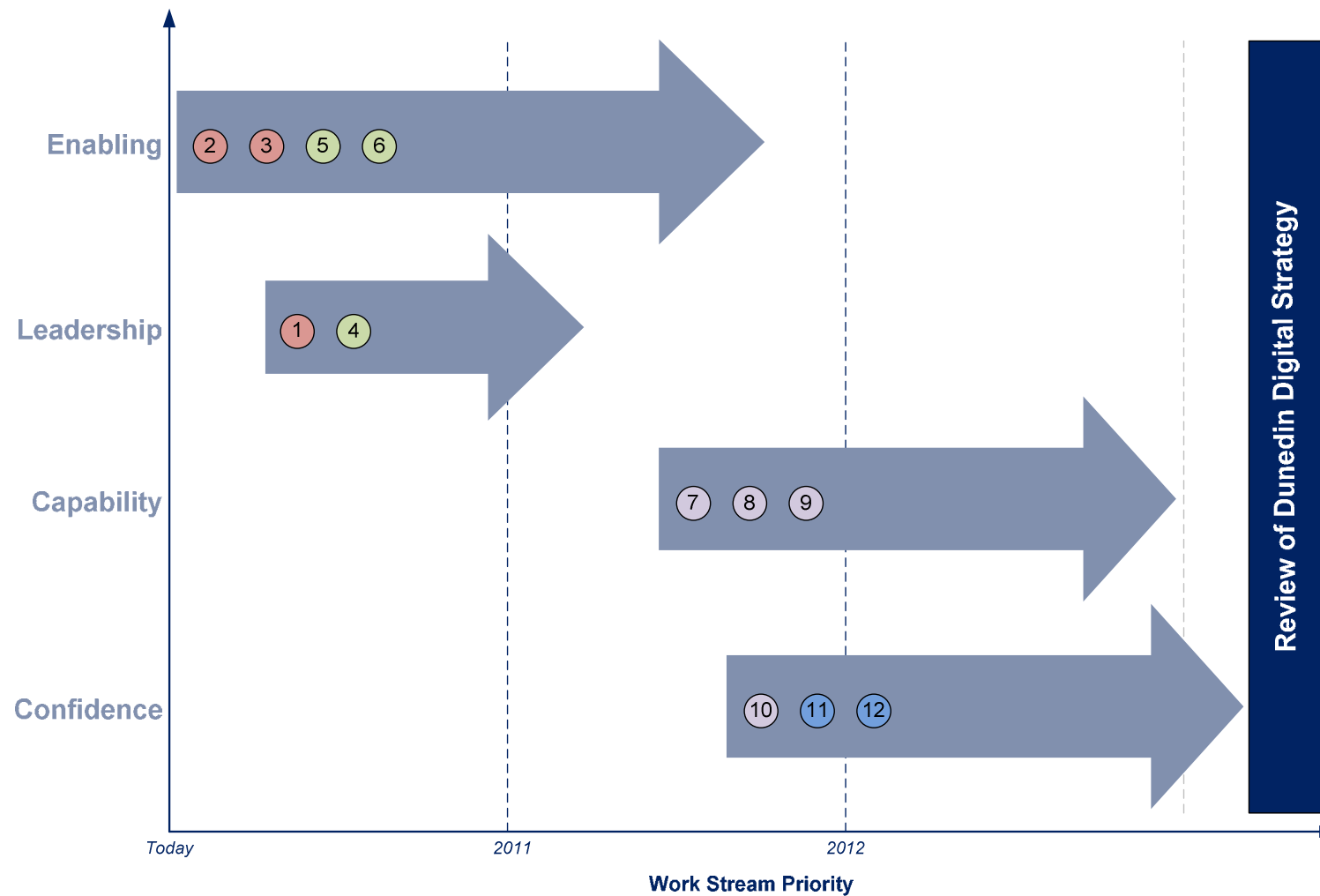
DIGITAL DUNEDIN – IMAGINE OUR CITY

Work Stream	Proj. Ref	4 Cs	Est. Times	Lead Agency	Recommended Contributors	Project Description
	10	<i>Capable</i>	2011 project team is formed 2011 review completed on resources available and implementation starts	Dunedin Digital Office or Dunedin Digital Trust	- Community learning Centres representative - Libraries representative - Polytechnic Representative - NZ ICT representative for 'kiwi skills' collaboration	Digital Literacy; raise the level of digital literacy across the community.
Confidence	11	<i>Confidence</i>	- Late 2011 key partnerships established and services agreed - Educational programmes operating from Late 2011 / early 2012	Dunedin Digital Office or Dunedin Digital Trust	- Education providers in the city - Community Groups to assess needs - Netsafe organisation - Law enforcement agencies	Digital Safe use; educational campaign to promote safe use of digital technology.
	12	<i>Confidence</i>	- Late 2011 project review completed and partnership opportunities explored - Early 2012 digital help desk service operating	Council through the General Manager Customer Services	Community Group to assess needs	Digital Help Desk; project to provide advice and guidance on connecting and using digital services.

Section Four describes a recommended implementation plan for the Dunedin Digital Strategy in more detail.

6 APPENDIX C: RECOMMENDED DIGITAL TIMELINE

The timeline below provides a recommended high level indication on when the Digital Strategy Advisory Groups and strategic projects should start.



How to read this document

This is **Section Two** of the Dunedin Digital Strategy

There are four sections within the Strategy. Each section builds upon the previous section to provide a detailed report on the digital opportunity, strategy and implementation plan.

SECTION ONE – FAST TRACK

An overview of the Dunedin Digital Strategy from start to finish.

This document summarises Sections Two to Four.

SECTION TWO – THE OPPORTUNITY

The key opportunities for visitors, residents, businesses and students across the four key strategic themes of: connection, content, capability and confidence.

SECTION THREE – THE STRATEGY

The Dunedin Digital Strategy.

The strategic vision and goals and the projects required to deliver the Digital Strategy.

SECTION FOUR – THE PLAN

Recommends an action plan to implement the Dunedin Digital Strategy.

Includes recommendations on which projects should start first, who should lead them and who should be involved.

Strategy prepared by: Stuart Dillon-Roberts

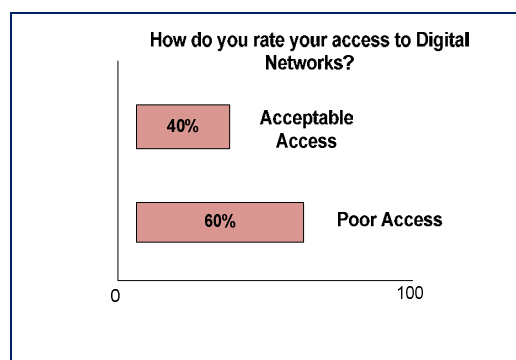
stuart@effectus.co.nz



The 'tag cloud' image on the front cover of this report records many of the key words raised during the Dunedin Digital Strategy consultation

1 OPPORTUNITY TO CONNECT THE CITY

Connectivity is the starting point in the development of a Digital Strategy for the city.



During the consultation the connectivity aspect was widely discussed and the importance of delivering a high quality, fast, accessible and affordable service strongly emphasised. There was frustration expressed by businesses that cannot connect to a fast digital network, complaints that services are not available outside of the city centre and that digital services are too expensive. Across the city only 40% of Dunedin residents surveyed are satisfied with their access to digital services.

The message from public consultation has been clear. The Digital Strategy needs to deliver a multi-tiered approach to create a connected city that delivers: fast, high quality, accessible and affordable digital networks to the community and businesses. This provides an opportunity for the Council to take a leading role in the development of a connected city.

The Connectivity Opportunity

To create a “connected city” whereby residents across the city, from Middelmarsh to Waikouaiti and across the city centre to down the Peninsula, have the option to connect to fast, high quality and affordable digital networks.

How do we do this?

Consultation and the research undertaken indicate that to create a connected city a multi-tiered approach is required. A starting point, and fundamental to a connected city, is to build a digital highway that provides a connectivity backbone across the city.

1.1 Building the Digital Highway

Like building a road, it is important to construct the foundations first. For Dunedin to be a connected city the core foundation of our digital services need to be built first and built well.

There are a number of technologies that can provide fast digital networks. Fibre optic cable is, for many, the leading technology for building the foundations for digital networks. Whilst there are other technologies that can be used, and these options need to be considered, fibre does provide a means to provide fast, high quality access over long distances.

Fibre is also used to communicate outside the city and connect Dunedin to the backbone of local and international digital networks. It is therefore an important building block in the development of a digital network and creating a connecting city.

Within the city commercial vendors do provide access to high speed digital networks and fibre optic technology. But this is

Why Fibre Optic?

Fibre optic can be used to connect to high speed data access or for providing access over long distances. Connecting homes or businesses to fibre enables huge improvements in the bandwidth provided. Fibre will enable fast data transfers, allow access to high quality video, improve communications across the internet and enable businesses and home users to partake in digital services today and in the future.

limited and not all businesses, community groups, schools and home users have access to fast digital networks. This is impacting our city and restricting the digital services that can be used.

*“I need fast internet access for my business today”
Business Owner, Dunedin Central City*

*“I have relocated my business to Melbourne
Australia due to the appalling connection speeds”
Business Owner, Dunedin Central City*

There are two issues here: to create a connected city we need fast access to digital networks and we need to deliver these services to those who need it most. What is missing is focus and businesses, community groups and schools have made it clear that fast access is needed to their doorsteps for them to use digital services today and in the future.

So what can be done?

1.1.1 Government and Commercial Initiatives

The Government has committed to accelerating the implementation of a fibre optic cable infrastructure over the next 10 years through an Ultra Fast Broadband (UFB) initiative. To achieve this objective the government is seeking commercial partners to implement fibre. Aurora (a Dunedin city operated company) has joined with Southland electricity lines companies in a joint venture named Flute. This proposal, which is in competition with national providers, intends to meet the government’s requirement of implementing fibre optic cable across Dunedin city. A decision on the preferred vendor will be made later in 2010.

Ultra-Fast Broadband

The government will be investing up to \$1.5 billion in open-access, dark-fibre infrastructure to accelerate the roll-out of ultra-fast broadband to 75 percent of New Zealanders over ten years.

Ultra-fast broadband is defined as a fibre-to-the-premise broadband service providing downlink speeds of at least 100 Mbps and uplink speeds of at least 50 Mbps.

Source:
www.med.govt.nz/broadband

In addition, commercial vendors also have plans for building faster digital services across the city. This includes expanding the current services, increasing capacity and introducing new services.

The Kiwi Advanced Research Network (KAREN) has two points of presence in the city at AgResearch in Mosgiel and at the University of Otago. The KAREN network is currently focussed on providing high speed networking access for research and education. However there are discussions underway to broaden who can use this network.

Both the government and commercial vendors are indicating that faster, higher quality digital services will be available to complement the current services available.

For the residents and businesses in the city this will be welcomed news but the time frame for these services to be available is unclear and the question on whether these services will meet the needs of businesses, community groups and schools is left unanswered.

“Isn’t the digital connectivity direction confusing with no clear vision for our city” Business Owner, Dunedin

The Need for Speed

Building a fast digital network is a critical component to the city’s economic competitiveness and an essential factor for our future.

Why?

The future of digital services lies in media-rich content requiring fast access to digital networks. We have moved away from plain text emails to sharing photos and videos online. The future will be about high definition TV through the internet, desktop video conferencing and online multimedia learning.

It is confusing with government initiatives waiting to be confirmed and commercial vendors all promising investment in the region. This presents an opportunity to take a leadership role and ensure that the city's digital highway is built promptly and that those who need it most are identified as high priority.

The Council or another group can be an advocate for connecting those businesses, community groups and schools that need faster connectivity as a priority, influence the implementation of faster digital services and work more closely with the commercial vendors and the government to ensure that commitments are met. Finally the lobby group can be an advocate for building a stronger digital highway and keep city residents informed on the development of the city's digital network.

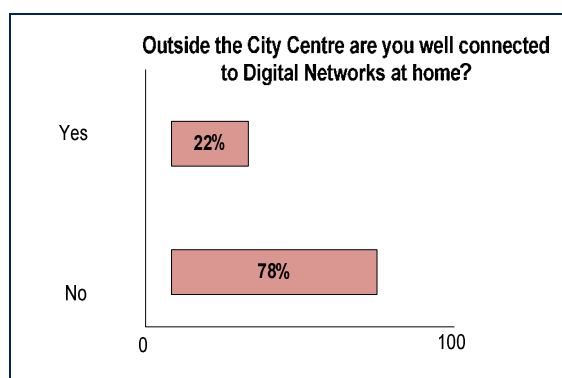
However, both the government's UFB initiative and the commercial vendors have a focus on delivering digital networks to the populous areas of Dunedin city. The more rural parts of Dunedin will miss out. A strong message during the consultation has been that we need to consider connectivity across all parts of the city.

1.1.2 Connecting Rural Dunedin

The consultation process highlighted that there are significant limitations accessing digital services outside the central parts of the city. Appendix A illustrates the service providers across the city and the limited choice outside of main city centre.

This is supported by the consultation survey with 78% of those responded complaining about the poor level of connectivity outside of the city centre.

A point raised during the consultation was that it falls to financial economics: a commercial network provider is not likely to invest in a digital network outside of the city when the financial return is lower than that in the central city. The government has recognised this problem and committed \$300 million to invest in connecting rural communities to digital services¹. This includes targets of 97% of rural households to be connected to broadband services and 97% of rural schools to be connected within the next 6 years. This is a positive move and presents a clear opportunity for the city to claim a stake in this investment.



But why connect the rural regions?

This question was raised during the consultation. There is no clear business case for connecting the more rural parts of the city. But to create a truly connected city and present the rural community with the opportunity to connect to digital services, digital networks within the rural regions will be required.

The consultation highlighted many opportunities to deliver new services to the rural community and a few are illustrated in the text box opposite.

Research also showed that at times there isn't a strong business case for connecting rural sectors, but once they are connected these areas flourish, new digital businesses start and those who choose to work from home can do so.

What Difference Will Connecting the Rural Community Provide?

Your comments:

- Practice nurses who can connect to rural patients through a web camera and check on their health remotely.
- Tourists being able to check the weather in Middelmarsh on a web cam before starting the Rail Trail.
- Rural schools being able to participate in online educational services and have video conference links.

¹ Source: Ministry of Economic Development Broadband investment, April 2010.

“Realise that the benefit of any investment in getting better access to Dunedin people is much larger than the investment. The ROI is excellent”
Business Owner, Port Chalmers.

But how can we connect the rural parts of the city?

There are a number of technologies and potential routes to connect the rural sector. Each option will need to be considered in more detail. As an illustration, Appendix B shows how a digital network could be extended to the rural parts of the city by utilising the rail infrastructure from Dunedin to Middlesbrough. In this example, a partnership with a network provider could reduce the financial investment required. This also presents an opportunity for a joint venture with other Councils to build an infrastructure that extends into their region and to work together to claim a stake in the government’s investment in the rural sector.

There are a number of questions to work through to find the best solution, best route and who can assist. To move this forward will require a project to review all options and make a recommendation of the most cost effective and meaningful solution. What we do know is that the rural aspects of the city are unlikely to be connected without leadership and support.

“I believe that if the DCC is truly committed to a regional communications strategy it should include ALL its rural residents, as much of the region is rural from Tūmāi to Henley to Hyde” Resident, Dunedin

1.1.3 Removing Barriers

Implementing a digital network across the city will require investment in technology and detailed planning to deliver services to the locations that need it most. During the consultation process it was suggested that the Council can support the installation of digital services by working with the network providers and remove any barriers that delay the development of the city’s digital services. The building sector also realises the need for preparing our homes and offices for digital services in the future. A new building code entitled ‘Premises Wiring Code of Practice’ recommends standards to be followed when wiring new buildings to gain the full benefits of digital services in the future. At present this code of practice is voluntary.

The Council needs to consider this new code of practice but also consider options to: fast track consent process, coordinate the installation of cable ducting when the opportunity presents and work closely with network suppliers to understand their longer term plans.

“One thing the Council can do is lay cable ducting to make it easier to install fibre” Business Owner, Dunedin.

The Council may wish to consider the use of redundant water/sewage pipes to lay fibre or railway lines to lay cable over large distances. Technologies are also advancing with options now available to lay fibre more efficiently without the impact of digging up roads or pathways. As a city the more that can be done to prepare for digital technology the faster digital services will be delivered.

This presents an opportunity for the Council to consider its internal processes, define the networking standards to be followed, assess any barriers that are impeding commercial network providers from installing digital networks and prepare new ‘green field’ sites for future digital technology.

1.2 Building an Accessible and Affordable Digital Network

A connected city will require a multi-tiered digital network. During the consultation there was strong support for a wireless network for visitors to use to provide access to digital services through portable devices, like laptops or mobile devices.

Creating a wireless (wifi) network across the city will deliver digital services to a wide area and allow portable or mobile devices to access digital services from a location they choose. Feedback from the consultation was this service should be free of charge.

FACT: 40% of respondents when asked “what service would bring prosperity to the region and make Dunedin a better place to live, study, work and play” **suggested a free wifi service.**

Consultation with the Tourism sector highlighted that there is a growing expectation from tourists that wireless technology will be available to check emails, book online services and connect to digital services on the internet. At present there are limited digital networks for tourists or visitors to use across the city, except for those operating commercially.

This isn't a new concept, students and staff at the University of Otago have access to a wireless network within the boundary of the University campus which allows access to the University's digital services and the internet. There are plans to extend this service to include student residential addresses. Otago Polytechnic and a commercial company are in partnership providing wireless services across Dunedin. In addition, the Council is currently trialling a free wireless service within the Octagon and Dunedin Public Library provides free wireless access to the internet as part of the Aotearoa People's Network Kaharoa². Across the city centre there are also commercial businesses operating wireless services which allow access to the internet for a charge.

This is More Than a Service!

It was commented during the consultation that providing a free wifi is more than a great service it also a great way to market and brand the city.

“Whilst Southland may have “zero fees”, Dunedin has free wifi”.

This is a great way to market the city to visitors and tourists.

The opportunity is to review the wireless services across the city, identify the areas that have no coverage and work towards establishing a city wide service.

“Implement a free wifi network across the city and put signs up around the city promoting the service” Resident, Dunedin

Can this be free?

Further work will be required to decide how the service could operate. It could be designed to permit access to the community, students, tourists and visitors if the amount of information downloaded or uploaded is kept within a daily limit or a period of time. Once outside this limit costs could be on-charged to use the service which may over time cover the operating costs of the network.

1.3 Summary

There is a strong need to improve access to high performance, high quality, accessible and affordable digital networking across Dunedin city. The opportunity is to implement a multi-tiered digital network which provides access to digital services across the city.

² 50% of New Zealand's public libraries are partners to the Aotearoa People's Network Kaharoa (<http://www.aotearoapeoplesnetwork.org/>) which provides free access to high speed broadband internet as well as a range of software applications.

The consultation process supported the development of the digital highway across the city and improving access to fast, high quality digital services to those who need it most. There was also strong support for the installation of a wireless network and providing this free of charge for a period of time.

Consultation emphasised that the rural parts of the city need to be included within any plans to expand digital networks. It was acknowledged that investment will be required, with potential partnerships or joint ventures with other Councils, to build a rural digital network. It was also stressed that there is uncertainty at present, with no clear picture on how digital networks will be developed across the city until the government and other agencies' intentions have been communicated. What we do know is that we need to be first in the queue to stake our claim for financial support and ensure we deliver the services the city needs.

Finally, the consultation also raised that the city needs to lobby for improved digital networks out of the city and expanding international access to digital services.

The opportunities are summarised in the table below:

Discussion	Opportunity	Strategic Ref
Many business, communities and schools not serviced by fast, high quality digital networks.	Opportunity to take a leadership role in the development of high speed access across the city and influence the implementation plans to ensure those who need it most are identified as high priority.	1
Confusion on how digital networking will be advanced across the city.	- Opportunity for the city to work more closely with the government, commercial agencies, KAREN and other bodies to understand digital network plans. - Opportunity to inform city residents on what digital networking service will be available and when.	1
Poor access to digital networks across the rural sector.	- Opportunity to review how digital networks can be delivered to the rural community and what partnerships or joint ventures can be established to deliver services. - Opportunity to provide wireless networks to the rural communities in the city. - Opportunity to work with the government and capitalise on the government's commitment to connect the rural sector.	1
Commercial vendors concerned over internal Council processes impeding the speed that digital networks can be installed. Green field sites are not being prepared for new technology.	- Opportunity for an internal review of Council processes and procedures to determine what can be done. - Opportunity to work with the Council to install a digital infrastructure to assist the installation of digital networks. - Opportunity to prepare green field sites for future digital services.	2
Need to provide a digital network that is accessible to all. Patchy access to digital networks across the city.	Opportunity to provide a Dunedin city wireless service for the community, visitors and businesses to use.	3

Discussion	Opportunity	Strategic Ref
Digital networks considered expensive by residents. Tourists to the city have an expectation to access free digital services.	• Opportunity to provide a free digital service for the community, visitors and businesses to access.	3

2 OPPORTUNITY TO CREATE DIGITAL CONTENT

Connectivity has dominated the digital debate at the expense of other digital enablers. This is naturally the most important starting point as good connectivity is essential for the development of content on digital networks. However, the content aspect of the four Cs presents the greatest opportunity to build economic wealth and prosperity across the city.

The city has many success stories already with world class digital businesses operating within the city. We also have many smaller start-up digital businesses that have established their roots in Dunedin. We have left the starting blocks but we need to keep these businesses within the city and encourage more digital businesses to grow the city, attract and retain talent and increase economic wealth. To do this we do need the connectivity but we also need to create an environment where innovation is encouraged and creativity is rewarded.

The Content Opportunity

The opportunity for Dunedin city is be to the city of digital innovation, boosting the local economy, opening new markets and enabling community services.

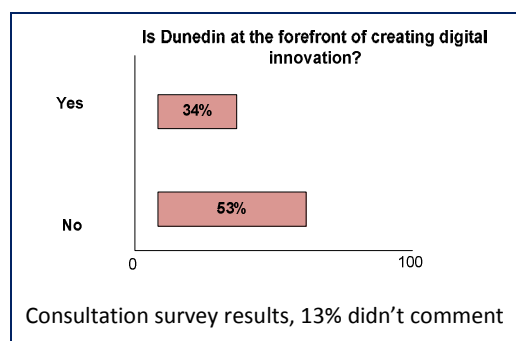
2.1 City of Digital Innovation

The Council, through the Economic Development Unit (EDU), has recognised the potential for increasing revenue within the city through the encouragement and financial support of the Information, Communication Technology (ICT) sector. The EDU leads a number of initiatives to assist start-up digital businesses and through its ICT cluster meetings it encourages greater collaboration across the sector. In addition we are fortunate to have the University of Otago's Centre for Innovation (CFI); which facilitates the development of commercial applications via collaborations between the University and industry researchers, student entrepreneurs, and academic researchers on the University's campus. It provides an innovative environment including high speed internet access for the rapid development of new products and processes.

Local Success Story:

"PocketSmith is a web-based calendar and budgeting tool that forecasts your future cash position. Based in the Dunedin Centre for Innovation, PocketSmith was started by three entrepreneurs with a view to going global from Dunedin. Their digital service now operates across an international market with users in 100 countries, and services the world's largest Employee Assistance Provider, who have 18.5 million clients worldwide."

www.pocketsmith.com



Finally, there is also a strong Chamber of Commerce operating in the city and local initiatives like Upstart House and The Distiller³ which provide a positive environment for start-up businesses.

The above examples paint a positive picture, yet the consultation meetings and survey results indicate that there is a low perception of our ability to create digital content or attract new start-up businesses within the city (refer to graph at left). It was commented that the businesses that operate in the city do so for the quality of

3 Reference: <http://thedistiller.org/> and <http://www.upstart.org.nz/>

life Dunedin provides and not because of the support from the Council, support networks or digital services available.

The results indicate there is more work to do to promote the city's strengths, attract and retain future entrepreneurs and create an environment that supports innovation.

So what can be done?

Consultation highlighted that there a number of opportunities to be considered. Firstly that having fast, high quality connectivity is imperative, without this, businesses will look elsewhere. This has to happen but also important is to support innovation and attract new businesses by promoting the city's strengths, develop closer alignment with the students at the University and Polytechnic and create a positive and supportive environment for start-up businesses to operate within. These opportunities are discussed in more detail below.

2.1.1 Promote Our Strengths

The city has a number of high profile success stories where Dunedin businesses have become international market leaders. This includes Animation Research Limited and Natural History NZ, both Dunedin companies that operate internationally and are highly regarded within their respective fields. These success stories present an opportunity to promote the city and that successful digital technology companies can thrive across the region.

Equally important is to promote the city to its students and tap into the entrepreneurs of the future before they leave. The opportunity is to work more closely with the University of Otago, Otago Polytechnic and The Distiller to highlight the city's strengths whilst also promoting the services that the EDU offer to support new businesses.

Another suggestion made during the consultation was to include our digital success stories within the city's biannual Science Week festival.

"Shout from the roof tops that Dunedin is a great place for digital entrepreneurs" Resident, Dunedin

2.1.2 Community Services for Start-Up Businesses

In discussion with the start-up businesses in the city it was recognised that one of the barriers for starting a new business is the investment in technology and access to services. To create a city where digital innovation is encouraged, the opportunity is to provide community services to start-up digital businesses. These services could be made available for a nominal fee or free for a period of time. The suggested services included:

- Technology services:
 - Shared Services: access to community based services whereby technology is provided for the community to use. This could include email, storage or web services. This type of service is often referred to as 'shared services'.
 - Connection: access to the internet for a period of time (for example 12 months).
 - Data Centre: access to a community provided data centre to safely store ICT equipment.
 - Knowledge Base: portal to share ideas and software development tips and tricks for the digital content developers.
- Business services:
 - Business Skills: sales and marketing advice and tips on developing business plans, etc.

- Mentoring: assist start-up businesses to mature their business focus and skills.

This is not the core business of the Council and partnerships with other organisations to provide these services would be required. It was noted during the consultation that many of the businesses across the city were willing to assist start-up businesses. This included: space in data centres to store servers, mentoring of executives at small businesses and access to resources to help the start-up business grow. What was missing is the facilitation of the process to link the start-ups and businesses together.

“More than happy to provide space in our data centre for the benefit of the community” Chief Information Officer, Dunedin

2.1.3 Sister City

To attract new businesses to the city we need to stand out from other cities across the country; there needs to be a point of difference. One of Dunedin’s sister cities presents an opportunity to provide the point of difference: Shanghai is considered one of the leading centres for innovation in the world and operates a number of academic and technology organisations across city. This includes the Shanghai Technology Business Incubation Association⁴ which leads innovation and supports new technology businesses in Shanghai.

This, and others institutions across Shanghai, present an opportunity for the two cities to work more closely on how they support innovation and grow businesses. This may also lead on to joint development projects, sharing knowledge and advice on trading in each country.

A point of difference and an opportunity to learn from one of the leading technology centres in the world.

2.1.4 Online Mentors

During the consultation the idea of ‘ICT Heroes’ was raised. Within the city there are entrepreneurs who have grown businesses to the point where they are now established at an international level. These entrepreneurs are well known across the ICT community and are referred to as ‘ICT Heroes’.

“I returned to Dunedin from Auckland to learn from the ICT Heroes in the city and use their guidance to grow my business” Craig Smith, Language Perfect

Animation Research Limited has created an entrepreneurs’ community website. Here members of the community can seek advice, submit ideas to mentors and collaborate with other entrepreneurs.

Source:
<http://whakaaturanga.arl.co.nz/>

This presents a great opportunity for the city. Firstly to promote that these ICT heroes are located in Dunedin and secondly, with their support, formalise a mentoring programme to inspire and develop the future start-up businesses.

Often when mentoring is considered it assumes a one to one meeting between two parties. It was raised however, that an online mentoring service for start-up businesses could be created whereby a wider audience can seek guidance from the ICT heroes and other digital mentors.

Animation Research Limited with support from local businesses has established an online mentoring service. Whilst in its early days and currently focussed on the Maori entrepreneur community this service could be developed for Dunedin city based businesses. An overview of the service is explained in the text box.

⁴ Website: www.tic.stn.sh.cn/en

2.1.5 Summary

The previous section describes a handful of ideas that were discussed during the consultation process. There was strong support from businesses to assist and eagerness from start-up businesses to engage more closely. What was clear was that both parties needed to be linked and services formalised to make Dunedin stand out in the crowd.

"Take leadership in bringing the right people and businesses together to lead innovation and find positive solutions for our city"

Resident, Dunedin

2.2 City of Digital Content

Throughout the consultation there have been a number of suggestions on the types of digital content that could be developed to benefit the community. Examples of these are shown in the text box to the right.

One of the ideas that had strong support was to develop a Dunedin City Portal.

2.2.1 Dunedin City Portal

The concept of the Dunedin City Portal is to provide a 'one stop shop' for information on the city.

It was commented that information on city events, activities and the tourism ventures available across the city are already on a number of web sites. Ideally this information could be integrated within a central service for the benefit of residents, visitors and tourists. A Dunedin City portal would provide this service as a single location to find out more about the city. Information could include: list of the events happening across the city, tourism ventures

Dunedin Portal Experience

- A visitor to the city connects to the free wireless service (see section 1.2) through their mobile device. The Dunedin City portal web page opens up. From here they look for the times of the Taieri Gorge train trip and then book a train excursion.
- Tourists connect to the wifi network and connect to the activities page to watch videos on what to do when in the city
- A resident connected to the wifi network and checks out the 'events' calendar to find out what events are running next weekend.

Examples from the consultation:

- Medical – create an iphone application that showed where the medical facilities and defibrillators are located across the city.
- Cultural Tours of the city through mobile devices that prompted tourists when they passed a place of interest.
- Centralised booking site for tourists to book excursions on Dunedin's attractions.

running for the week, a centralised booking system and snippets of information on the city's attractions. The portal would be 'best of breeds' and developed to be visually stimulating and embrace the latest digital technology to showcase the city as a centre for innovation.

In addition, integrating all the attractions and activities across the city into a single service supports the development of brand 'Dunedin' and provides an ideal platform to promote the city.

The text box to the left provides an illustration on how the service could operate.

"I like the idea of a Dunedin portal which takes potential visitors through the various activities from the Taieri Gorge railway to penguin watching at Sandfly beach (paid for as well as free activities). Also, we're a university town, it would be a good idea to have some kind of "education" portal for potential students which could provide information on what courses are here, where to live, average rents, "find a flatmate" services etc." Resident, Dunedin.

It was also discussed that the Dunedin City Portal service could be integrated with the Dunedin wireless network (discussed in section 1.2) and be the first 'port of call' when connected to the wifi network.

2.2.2 Dunedin City Council

The opportunity is to create a city that embraces digital services and is at the forefront of creating digital content.

During the consultation it was raised that the Dunedin City Council has to 'get onboard' and embrace this vision for the city and deliver more services to the community online.

"Greater ability to register applications online and to use the internet for all of the Council's services" Resident, Dunedin

Suggestions included: paying rates online, forms available online, policy development (e-democracy) and increased community engagement through online social networking tools. There was strong support for the Council to engage more closely with the city residents to understand what online services are needed and then take a progressive approach to delivering more online content.

In addition, during the consultation it was noted that this would provide the Council with the opportunity to be more transparent through digital services and publish Council datasets to the community.

"Publishing council datasets in open formats would signal that Dunedin is a city with a forward thinking vision for ICT, and would allow ICT businesses, students and others to develop value-added services to ease and improve the ease of living in Dunedin and to allow for better public awareness of and contribution to policy and decision making" Dunedin Resident.

This will signal to the community that the Council is committed to delivering digital content and is actively pursuing opportunities to serve residents through online services.

2.3 Summary

The opportunity is for a leadership role in the development of digital content and providing an environment that supports digital innovation. This will attract new businesses, keep talent in the city and boost the local economy.

In addition, the Council have the opportunity to lead by example and develop more online services and be more transparent with Council information.

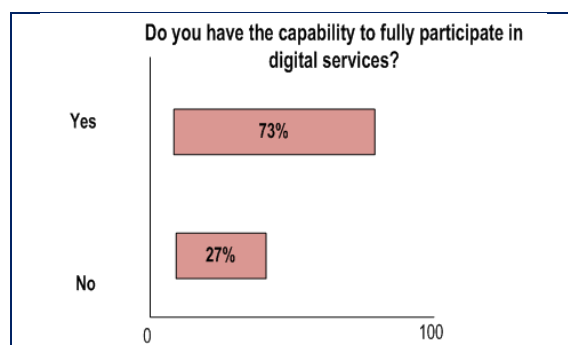
The opportunities are summarised in the table below:

Discussion	Opportunity	Strategic Ref
Improve the attractiveness of the city and promote to all the services we have available.	• Opportunity to promote the city and highlight local success stories and the services available to attract more businesses to fuel economic growth.	4
Need to be innovative to attract and retain new start-up businesses.	• Opportunity to provide free services to start-up businesses including access to technology and business services like sales and marketing advice. • Opportunity to work with our sister city to review how to encourage start up businesses and grow technology. • Encourage start-up businesses to grow through mentoring services and learning from the ICT heroes within our city.	4
Improve Council services available online and be more transparent with Council information.	• Council to lead the way and deliver more services online to the community. Focus on online payments, RSS feeds and council forms. • Opportunity to use social networking tools to engage with the community. • Opportunity to review e-democracy to engage more close on policy development. • Council information available for residents to analyse and review.	5
Digital content difficult to locate and operating in isolation across the city.	• Opportunity to create a 'Dunedin Digital Portal' to centralise information for visitors, residents and tourists. • Promote the city's attractions and community information within a single service. • Support the message of brand 'Dunedin'.	6

3 OPPORTUNITY TO BUILD CAPABILITY

Technology is rapidly changing the way we do things, how we do them and by what means. Keeping up with technology both at home and at work can be a daunting task.

There is an increasing need to learn new skills to keep abreast of technology and use digital services advantageously within a business, community or school setting. It can be argued that this is the most important of the four Cs as we can have the best connected city in NZ and provide rich digital content but if residents, communities or businesses cannot fully participate in digital services the Strategy has failed.



Dunedin has a disperse set of abilities on digital technology. On one hand we have experts within the field and entrepreneurs creating new digital services, on the other hand we have people with limited knowledge on digital services. The survey results, indicated in the text box, indicate a high level of capability across those who completed the online survey; this is to be expected as the digitally enabled tended to response to the online survey. In contrast during the consultation workshops a different message was heard with many communities and

businesses lacking the skills and understanding to fully participate in digital services. There is a clear digital skills gap between the digitally capable and those lacking the skills to fully understand and use digital services.

The Capability Opportunity

The opportunity is for the city is to raise the level of access, knowledge and capability on digital services to create a digitally capable city.

3.1 Schools and the Community

Education is the starting point for a capable community. It was strongly supported during the consultation that the city needed to raise the level of digital literacy by improving access to digital networks for schools, communities and families in the city.

3.1.1 Capability across Schools

A number of schools across Dunedin city have poor access to digital services and lack devices to connect to digital networks. There are exceptions, with a number of schools that are well equipped and serviced. The consultation process highlighted that many felt it was important to address this issue first to ensure that future generations are exposed to digital services and have a high degree of digital capability.

In addition, another strong message during the consultation was to connect schools to fast and high quality internet access. This is a message that is also being supported by the government through the National Education Network (NEN). NEN has been



The NEN provides very fast, unrestricted broadband to schools, creating a new learning environment for collaboration and access to online content and services.

Source:
www.karen.net.nz/national-education-network

funded to extend a trial to connect 200 schools across New Zealand. This includes providing high speed access, communication equipment and financial assistance to cover costs of connecting to the NEN.

This is an important initiative and worthy of support but it is currently just a trial and will provide for only a small percentage of schools across New Zealand.

This presents an opportunity to review locally which schools have access to high speed digital networks, which ones have limited access and identify options to connect the schools that need it most. This may involve the NEN or be a local initiative like creating a Dunedin Schools Digital Loop to connect schools together and provide shared access to digital services.

Connection is the first priority and, as raised in the previous section, this is an issue that needs to be addressed. It is also recognised that many schools do not have sufficient computers to connect to the internet or digital services. This was raised as a concern during the consultation and expressed that there is a need to equip schools with digital technology. This technology could include: additional computers, mobile devices (laptops\i-pads) or interactive white boards so that classes can see digital services in action.

Your comments included:

*"Increase the number of computers in all primary and intermediate schools
(at least 5 per classroom)" Business Owner, Dunedin*

Computers In Homes

www.computerinhomes.org.nz

This project aims to support low income communities to use ICT to strengthen their education.

It works with low decile schools and families in greatest need by providing refurbished computers.

*"My local school needs more computers to fully
participate in the new online educational services"*
Resident, Dunedin

Across New Zealand this issues has been recognised and schemes like 'Computers in Homes' have been developed to increase the number of computers in low decile schools. The approach taken is to refurbish computers and provide them to schools or families in need. This scheme also includes training and assistance with using the

computer.

So what can we do?

To create a truly connected and digitally capable city options for increasing the accessibility of digital devices to school age children needs to be considered.

Options that were expressed during consultation included:

- Establishing a computer broker service to allow businesses or individuals that no longer require a computer to donate this to a school that is in need. This could be facilitated through the 'Computers in Homes' scheme or through other initiatives currently operating in the city.
- Creating an active partnership where commercial vendors sponsor technology within a school or a community group. This may be in the form of computer hardware, interactive white boards or services to access the internet.
- Providing grants to support the purchase and maintenance of technology for schools or community groups in need.

There is a clear desire to address the limited access to digital devices within certain schools across Dunedin city. The opportunity is to consider initiatives to work more closely with businesses that regularly replace digital technology to identify surplus technology that schools can use. Consideration should also be given to direct financial support to purchase new items and maintain those currently in use.

In addition, any scheme increasing access to digital technology also needs to include training and assistance to ensure the technology is used well.

3.1.2 Capability across the Community

The consultation process also highlighted the need to improve digital capability across the community by improving access to digital technology and raising digital literacy.

A concept discussed during the consultation process was to establish a Computer Club House or club houses in the city. The concept behind the Computer Club House is discussed in the text box (to the right).

It is envisaged that the Club House will provide a 'drop in' centre for young people to use and learn about digital services in a stimulating and creative environment. Adult mentors would be on hand to guide and support those who use the facility. The mentors supporting the Club House could be volunteers from the ICT students at the University of Otago or Polytechnic.

There was strong feedback from the consultation workshops that a Computer Club House would become a community asset that would raise the capability of digital services and provide access to those who at present are not given the opportunity. The club house could be located within one of the Council libraries, a school or a Community Learning Centre.

The opportunity here is to review how a Computer Club House, or similar initiative, could operate within the city to become a community asset and emphasise the commitment to raising capability across the city.

In addition, there are other sectors that need to be considered within the community. For example: increasing digital capability within the pre-school and retired age groups. These sectors also should be considered and the opportunity is to review the Computer Club House concept and adapt this to be inclusive for all the community.

Computer Club House

The Club House learning approach is designed to empower youth from all backgrounds to become more capable, creative, and confident learners.

The Computer Club House provides a creative and safe out-of-school learning environment where young people from under-served communities work with adult mentors to explore their own ideas, develop skills, and build confidence in themselves through the use of technology.

Source: www.computerclubhouse.org

3.1.3 Open Source Software

It was raised during the consultation that many of the digital devices in schools and across community groups had fallen behind the latest version of operating system or software because the cost to upgrade was too expensive. It was suggested that 'Open Source' software may be beneficial. Many schools in Dunedin have been converted to Google Applications and use the Linux operating system. During the consultation there was support for Open Source software to be promoted over purchasing commercial software and the benefits explained to communities and schools. It was also suggested that a 'Dunedin Open Source DVD' could be created, which would install an open source operating system and free

Open Source Software

Open Source Software is growing in popularity. Software that is open source is distributed under a licensing arrangement which allows the software to be shared, viewed and modified by other users and organisations. One of the most commonly known open source operating systems is Linux.

software. This may be a solution to resolve those computers that require upgrading and install the latest version of software at no cost.

3.2 Business and Not-For-Profit Engagement

Equally there is a requirement to improve the capability of the business and not-for-profit (NFP) sector to fully participate in and use digital services. It was recognised that digital services play an important role in how businesses communicate, engage with customers, promote products, increase market presence and sell products. It was commented that many businesses do not fully understand the benefits of digital services and have made little investment in technology.

Similarly, the NFP sector and tourism sector expressed views that many do not fully understand the capabilities digital services can present to their sectors.

“Many businesses and community groups wish to use digital services more but lack the knowledge to get going” Community Group Leader, Dunedin

Whilst education has a role to play here and organisations like the Chamber of Commerce provide educational courses for businesses, it was noted that impartial advice is needed to fully explain the benefits of digital services to organisations. Whilst many vendors in the city can provide advice on digital services and technology it was commented that there is a reluctance to use these services as the vendors’ focus can be on the products they sell.

This presents an opportunity to establish a service that improves capability across the business and other sectors by sharing knowledge and providing impartial advice. During the consultation it was discussed that a role of ‘Digital Ambassadors’ could be established to fulfil this need.

3.2.1 Digital Ambassadors

The role of the Digital Ambassador could be to raise the capability and understanding of digital services available across the city. This may be in the form of training, workshops, digital “boot camps” or direct advice. The objective is to link those ‘who know’ to those ‘who don’t know’.

It was discussed that the digital ambassador scheme could operate in a similar way as the Dunedin Community Law centres capitalising on students, business professionals or professional societies⁵ in the city to lead the service. Secondary school students may also wish to support this service.

The text box opposite describes how the Dunedin Community Law centre operates. In addition, it was suggested that seconded staff from businesses or funded positions through community grants could also be used to support the role.

It was acknowledged that this scheme needs to act independently from any vendor with a clear mandate for promoting digital services, raising capability and advising on how digital services can be used to aid productivity, introduce new services or open new markets. The role would provide impartial advice, training and present digital case-studies to

Information for Dunedin Community Law Centre Student Volunteers

The Dunedin Community Law Centre opened in July 1980, and has been providing free legal advice, information, education and advocacy services to the Otago community since that time, with a particular focus on those members of the community who have difficulty accessing traditional legal resources. There 4 qualified lawyers, a community worker, a law reform worker, an education coordinator, and support people on the 'day staff'. There are also 120 student clinic advisers and 80 lawyers volunteering on a rostered basis to provide legal advice through the advice clinics.

Source: www.dclc.org.nz

⁵ For example, groups like the Dunedin NZ Computer Society.

highlight what can be done. During the consultation it was discussed that ‘digital ambassadors’ may also be in a position to run the Computer Club Houses (reference 3.1.2) and be key supporters of the opportunities discussed in that section.

“Educate people and businesses in the benefits to be gained from having these services and skills. But also make them aware of the dangers (both commercial and social) of falling behind” Business Owner, Dunedin.

3.3 Digital Literacy

Increasing access to digital technology needs to be underpinned by raising the digital literacy across the community. It was noted during the consultation that increasing the digital literacy skills across the community is vital to improving our capability to use technology well. We are fortunate to have Otago Polytechnic’s Community Learning Centres based in the city. These community centres provide an opportunity for residents to complete free training on software applications and digital services.

Digital Literacy Examples

- Using SKYPE to connect to friend or family overseas
- Buying goods through an online shop
- Moving your digital pictures from a digital camera and editing them

These centres are a great asset and need to be encouraged and capitalised upon to further develop capability, raise digital literacy and skills across the community.

It was commented during the consultation process that practical ‘meaningful’ examples on how to use digital services will be necessary to build digital literacy skills. The text box provides examples on the meaningful use of technology which

would also raise digital literacy. There are other digital literacy resources both locally and nationally that can be used as part of a multi-tiered approach to raising digital literacy.

3.4 Re-use and Recycle

Initiatives within this section encourage increasing the number of digital devices available to the community and schools. These are important initiatives as access and exposure to the latest digital devices will improve digital capability. During the consultation this approach was commended but it was also raised that we needed to consider the implications of electronic waste and the impact on the environment. Within Dunedin, Cargill Enterprises provide an e-waste and e-recycling service where computer equipment and associated electronics can be recycled rather than disposed of at a landfill site. Also at the Green Island landfill site a ‘Rummage’ store will accept electronic equipment like computers, keyboards and monitors that are no longer wanted. These items may be of use to someone else and allow items to be re-used rather than disposed. Both of these initiatives need to be encouraged and promoted as part of the initiatives to increase the use of digital devices.

The opportunity is to work with businesses, communities and schools to encourage the re-use and recycling of digital devices as part of the ongoing initiative to raise digital capability.

3.5 Summary

The need is to improve the level of digital literacy and capability. The opportunity is to raise capability through improved access to digital technology particularly at schools and providing access to educational resources to raise awareness on digital services and the benefits these services can provide.

The consultation process highlighted public support for improved access at schools and increasing the technology available for school age children to use. This was further supported with the suggestion of establishing a Computer Club House in the city as a community asset to improve access to digital technology and exposure on digital services. It is important to build the capability from an early age to

ensure that future generations have the capability to use and advance within a digitally empowered environment.

There was also strong support for supporting the business and other sectors by providing impartial advice, training and support to use digital services and improve the services they provide to their customers and the community.

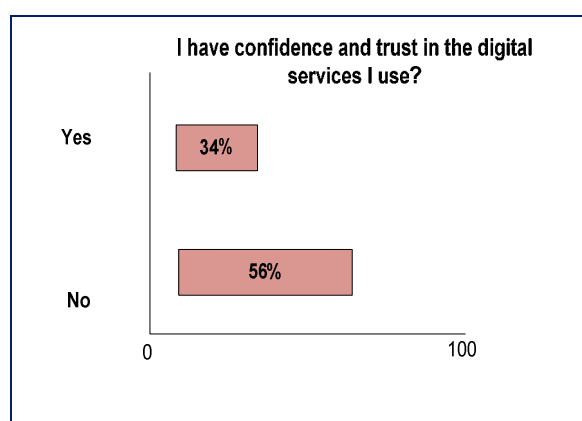
The opportunities are summarised in the table below:

Discussion	Opportunity	Strategic Ref
Not all schools have access to fast and high quality digital networks.	- Opportunity to take a leadership role in the development of high speed digital network access for schools. - Leadership role to work with NEN and lobby for connecting the schools across the city.	1
Many schools have limited access to technology to fully participate in digital services.	Opportunity to increase the number of digital devices at schools through sponsorship, computer broker services and technology partnerships.	7
Many families do not have access to computers to access digital services.	Opportunity to improve access to computers in the home.	7
Many schools and community groups have computer software that has fallen behind the latest standards and are faced with high costs to upgrade. Growing concern at high costs for technology.	- Opportunity to promote open source software as an alternative and minimise the expense of maintaining computer software. - Opportunity to create a Dunedin Open Source DVD to install software on computers at no cost.	7
Limited option for communities, particularly youth groups, to use digital technology and digital services in a stimulating and creative environment.	- Opportunity to establish a 'Computer Club House' in the city to provide access to digital technology to members of the community who have little exposure at present. - Provide a community based asset and highlight the city's commitment to raising digital capability across the community.	8
Many businesses do not have the skills to fully participate in digital services. Sectors like not-for-profit have limited access to impartial advice on how digital services can advance their organisation and the community they serve.	- Opportunity to create the role of 'Digital Ambassadors' to lead training and provide impartial advice to the small business, not-for-profit and tourism sectors across the city. - Opportunity to encourage the use of the community learning centres to provide educational campaigns and raise digital capability.	9

Discussion	Opportunity	Strategic Ref
Growing number of digital devices that are not being re-used or recycled.	• Opportunity to promote the re-use and recycling of electronic waste and encourage the services that operate in the city.	7
Recognised the importance of raising digital literacy across the community and demonstrating practical use of digital services.	• Opportunity to develop digital literacy initiatives that raised digital capability across all sectors in the community. • Capitalise on the services available and promote these across the community.	10

4 OPPORTUNITY TO RAISE DIGITAL CONFIDENCE

The community and businesses across the city need to trust digital networks and use them with confidence to create a digitally connected city. The threat of a security incident, exposure of private information and the reliability of digital services are concerns that were expressed during the consultation. This was supported by the consultation survey with over half the respondents raising concerns over the use and access to digital services (as per graph below). Particularly, people were concerned over the privacy of information and threat of viruses.



Whilst there are a number of initiatives to raise security awareness, including Netsafe (www.netsafe.org.nz), the consultation process indicated that there is still a high degree of concern regarding security risks which is preventing many from fully participating in digital services.

In addition, concern was also expressed over the reliability of digital services and the impact of a failure on businesses and community who rely heavily on digital services. There is a need to build the confidence of residents, community and business sector in digital services so that that they

can fully participate.

The Confidence Opportunity

The opportunity is to strengthen the understanding and knowledge required for residents to embrace and participate fully in digital services.

4.1 Education and Awareness

Many commented during the consultation their unwillingness to purchase products over the internet due to the risk. Whilst it could be argued that these issues need to be addressed at a nationwide level, to fulfil the vision of a city where the residents confidently use digital services a clear understanding of the threats is required and a proactive education and awareness campaign supported.

“Education is key to raising confidence regarding what the risks are and how to avoid them” Business Owner, Dunedin.

It has been raised that the Community Learning Centres (CLC) provided by Otago Polytechnic or similar services by other organisations are positioned well to enhance digital capability across the city (see section 3.3). This approach, to deliver community education campaigns, could equally be used to provide educational campaigns on the safe use of digital services.

Other methods to raise awareness suggested during the consultation included:

- A column in the Council publications like CityTalk to promote safe internet use and targeted campaigns like buying products over the internet in the Christmas publication;
- Guidance on the Dunedin City Council website and downloadable advisory documents on best practices to follow;

- “Keep secure” week, similar to other campaigns organised to promote safe practice on digital services; and,
- Security best practice advice on the Dunedin City Portal (raised in section 2.2.1).

To deliver these services the Council may need to consider a partnership with a Dunedin institution to guide the development and publication on safe use practices. It is also important to keep one step ahead of the risks and the views of residents and the business sector will need to be canvassed to adapt the security information provided.

Close engagement with the law enforcement agencies was also encouraged to understand the digital risks that are being reported.

“On a daily basis we have a reported incident of cyber bullying made at the Dunedin Police Station” comment made during Civil Defence workshop.

For a more specialist risk, like cyber bullying it was suggested that free workshops could be provided to the community. One of the key messages during the consultation was that the awareness campaigns need to stay fresh and keep abreast of the security risks, understand the changing needs and be creative to promote best practices.

4.2 Help

It was commented that as digital services are advanced across the city there is no service available for residents to turn to for help. The suggested solution was to create a city-wide ‘Digital Help Desk’ service.

This service will allow residents to seek assistance on the safe use of digital services and request advice on best practices to follow. It is not considered that this service will provide technical support on software applications but rather advice on best practices for the safe use of digital services and how to access digital services in the city. The types of questions the Digital Help Desk could answer are shown in the text box.

In addition it was suggested that the Digital Help Desk could also provide:

Digital Help Desk

The types of questions the Help Desk could answer?

What are safe practices to follow when buying goods over the internet?

How do I keep my computer safe from viruses?

How do I report a text bullying incident?

- Assistance connecting to digital networks, like the Dunedin Wireless Network (as discussed in section 1.2)
- Guidance on the digital services across the city, like the Computer Club House suggestion (discussed in section 3.1.2) or Digital Ambassadors suggestion (discussed in section 3.2.1)
- Promotion on the digital literacy initiatives operating in the city (discussed in section 3.3)
- Guidance for tourists or visitors to the city on what digital services are available
- Promotion for local ICT businesses who can help with fixing a computer or removing a computer virus

To answer these questions the Digital Help Desk would need to be kept informed on the progress of the Dunedin Digital Strategy projects, have access to online resources and prepared responses for common questions. It may also include help sheets that residents can download or be sent through the mail.

The Council has already a city help desk and call centre operating within the Customer Services Agency (CSA). The CSA, located on the basement floor of the Civic Centre, responds to questions from the community either in person, via email or by phone. This team are ideally positioned to provide the Digital Help Desk as part of their service to the community.

Providing a Digital Help Desk service will further emphasise the commitment to raising capability across the city and provide reassurances to residents that best practice advice and guidance is available.

4.3 Ensuring Reliability

The reliability of digital services was also raised during the consultation as an important consideration to raise confidence in digital services. It is important that digital services operate well and are built to provide a reliable service to the residents, community and businesses across the city. Confidence in digital services will be lost if the service provided is unreliable.

It cannot be expected for the Council to review and audit the technical architectures or the operations of all digital service providers to the city. However a review might be beneficial to identify the key services operating in the city and seek reassurances that the vendors providing these services have considered redundancy and have plans to manage during any significant faults. In addition, performance of our primary service vendors could be reviewed and published on an annual basis.

4.4 Summary

The need is to raise the level of confidence for businesses and the community to fully participate in digital services. The opportunity is to raise awareness of the risks when using digital services and promote best practices through educational campaigns. In addition the opportunity to provide a Help Desk for residents to contact to seek advice on accessing and using digital services safely should be considered. Finally the consultation highlighted that the reliability of digital services is a considerable factor in maintaining the confidence in the services provided.

The opportunities are summarised in the table below:

Discussion	Opportunity	Strategic Ref
Lack of confidence using digital services and unwillingness to full use the services due to risks.	• Opportunity to build confidence through a proactive educational campaign utilising various methods to promote safe practices. • Educational courses available from community learning centres or similar organisations.	11
No clear guidance on safe practices available to the community.	• Opportunity to prepare downloadable best practice guides. • Annual review on what risks are the greatest concern to the community and businesses.	11
No service available to help residents connect to digital services and use them safely.	• Opportunity to provide a central help desk service for all to contact. • Use this service to promote best practice use of digital services and provide advice to tourists and those who wish to connect to digital networks.	12

Discussion	Opportunity	Strategic Ref
Lack of confidence that digital services are reliable.	• Opportunity to review the key digital services provided to the city and audit what measures have been taken to ensure reliability of services.; • Publish an annual review of services provided and the reliability build into these services and the performance over the past year.	1

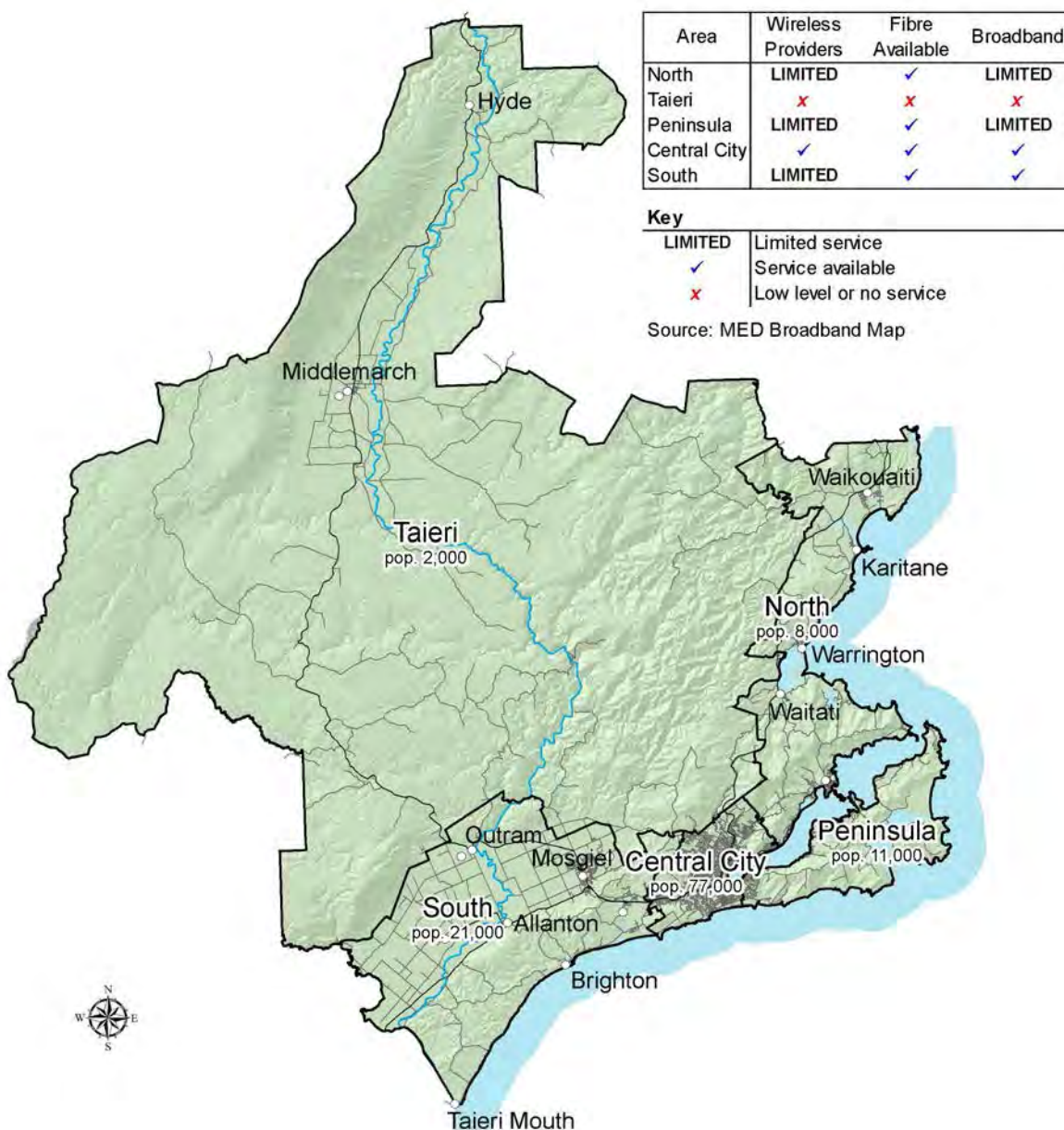
This is the end of Section Two

Section Three is 'The Strategy'.

The strategic vision, goals and projects required to deliver the Digital Strategy.

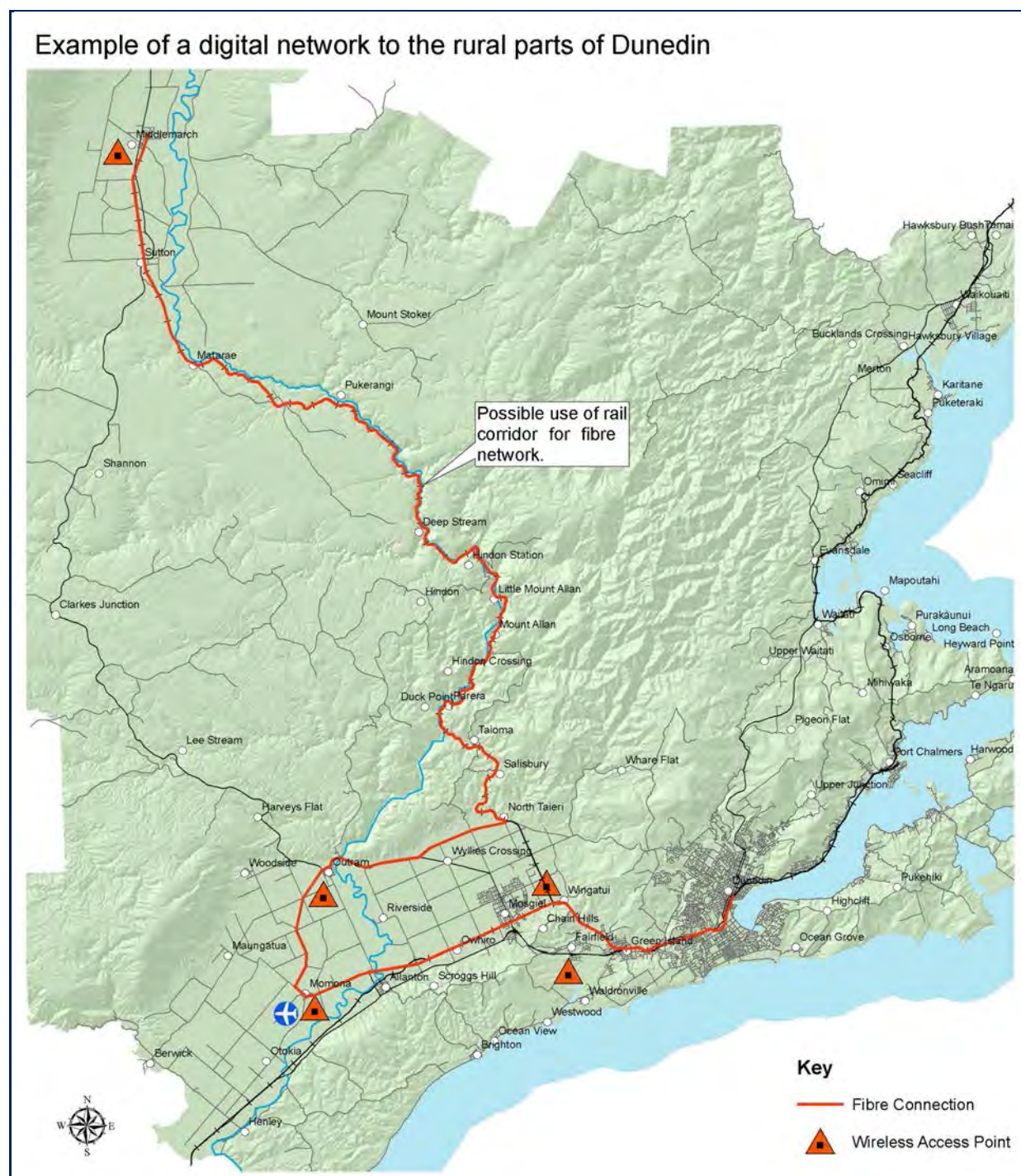
APPENDIX A: DIGITAL SERVICES AVAILABILITY ACROSS THE CITY

Digital Services availability across the city



APPENDIX B: EXAMPLE OF RURAL CONNECTION

Example of a digital network to the rural parts of Dunedin



Dunedin Digital Strategy 2010 to 2013



SECTION THREE: THE STRATEGY

How to read this document

This is **Section Three** of the Dunedin Digital Strategy

There are four sections within the Strategy. Each section builds upon the previous section to provide a detailed report on the digital opportunity, strategy and implementation plan.

SECTION ONE – FAST TRACK

An overview of the Dunedin Digital Strategy from start to finish.

This document summarises Sections Two to Four.

SECTION TWO – THE OPPORTUNITY

The key opportunities for visitors, residents, businesses and students across the four key strategic themes of: connection, content, capability and confidence.

SECTION THREE – THE STRATEGY

The Dunedin Digital Strategy.

The strategic vision and goals and the projects required to deliver the Digital Strategy.

SECTION FOUR – THE PLAN

Recommends an action plan to implement the Dunedin Digital Strategy.

Includes recommendations on which projects should start first, who should lead them and who should be involved.

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The 'tag cloud' image on the front cover of this report records many of the key words raised during the Dunedin Digital Strategy consultation

1 DUNEDIN DIGITAL STRATEGY

1.1 Vision

The Dunedin Digital Strategy vision is to create “**Digital Dunedin**”.

1.2 Core Strategy and Objectives

This vision will be achieved through the leadership, commitment and support of the following strategic goals and objectives across the Connection, Content, Capability and Confidence themes:

Theme	Strategic Goal and Objectives	Projects
Connection	A Digitally Connected City to increase the access, affordability and the quality of digital networks connecting the residents and businesses across the city <i>Objective:</i> - Delivery of a high performing and quality digital network across the city; - Improved accessibility and affordability of digital services.	Reference Section 2.1
Content	A Digitally Enabled City to deliver more digital content to the community, visitors and businesses across the city and develop Dunedin as a centre for digital innovation <i>Objective:</i> - Develop an environment that fosters and encourages digital creativity; - Focus on increasing the delivery of community services through digital technology.	Reference Section 2.2
Capability	A Digitally Capable City to raise the level of knowledge, literacy and skills to use digital technology across the community, business and service sectors <i>Objective:</i> - Raise capability across the community through greater access to digital technology and digital services; - Improve knowledge and skills across the city through education, advice and awareness campaigns.	Reference Section 2.3
Confidence	A Digitally Confident City to increase assurance that digital services are safe and reliable for residents to fully embrace and participate in <i>Objective:</i> Educate, promote and provide assistance on the safe use of digital services across the community.	Reference Section 2.4

2 STRATEGIC PROJECTS

The following strategic projects and initiatives have been identified to deliver the goals and objectives of the Dunedin Digital Strategy.

2.1 Connection: Strategic Projects

Theme	Strategic Goal and Objectives
A Digitally Connected City	A Digitally Connected City to increase the access, affordability and the quality of digital networks connecting the residents and businesses across the city <i>Objective:</i> ○ Delivery of a high performing and quality digital network across the city; ○ Improved accessibility and affordability of digital services.

Ref	Strategic Projects and Tasks	Target
Objective: Delivery of high performing and quality digital networks across the City		
1	Leadership: Digital Network Advisory Group Establish a Digital Network Advisory Group consisting of representatives from the community and businesses sectors across the city. The role of the advisory group will be to advance digital connectivity across the city. This includes developing a constructive relationship with the successful vendor on the Government's Ultra Fast Broadband initiative to influence the implementation of digital networks to the locations that need it most. In addition, this group will lead discussions with the KAREN, NEN and others government bodies on future digital networking opportunities across the city. This includes establishing digital networks in the rural parts of the city. This group will report into the Digital Strategy Steering Team and it is proposed the key responsibilities will include: 1) Lead discussions with government and commercial agencies to advance fast, high quality, digital networks across the city. Influence the implementation of digital networking to those businesses, schools and communities that need it most. 2) Lead a project to determine how digital networks can be delivered to the rural parts of the city. Review the opportunity for sharing the costs of installation through partnerships with commercial vendors and/or joint ventures with other Councils that border the city. Initiatives by the government to fund rural	• Currently 40% of residents surveyed reported that they had acceptable access to digital networks. Target is to increase this to 75% by 2016. Improving upon the government's target of 2020¹. • Currently 22% of residents surveyed report acceptable access to digital networks in the more rural parts of the city. Target is to provide fast broadband to 97% of rural residents by 2016. • Introduce an annual survey to measure the performance of digital networks and level of satisfaction across the community.

¹ Government target of providing ultra-fast broadband to 75% of New Zealanders by 2020. Source: MED.

	broadband will also need to be considered as part of the review. Technology also has a part to play here and a review on the best solution or mix of solutions to serve the rural communities will be required. 3) Be transparent and inform residents and businesses of connectivity progress across the city and any forthcoming developments. 4) Lobby for improving international internet access to the country to ensure the city is serviced well in the future.	Regularly inform residents on digital network developments across the city.
2	Project: Digital Roadblocks Goal1: The Council to provide leadership in establishing the digital infrastructure needs of the City through: - Identifying the digital infrastructure standards necessary for the City; - Preparing a 'digital infrastructure map' of the city to show where the digital infrastructure (like fibre ducting) has been installed across the city and make this information available to all commercial vendors; - Identifying where that digital infrastructure is required to support digital networks in the future; Goal 2: The Council to deliver mechanisms for facilitating the installation of digital infrastructure through: - Including networking infrastructure in the code of subdivision and district plans to prepare 'green field' sites and support faster implementation of digital networks; - Defining standards and installing network infrastructure as part of the continuing and scheduled programme of work at the Council (e.g. Roading, water and waste);	- Digital Networking standards defined by end of 2010. - Currently no preparation is undertaken. Target to have a Council working party established with a target of including digital networking standards within the Council programme of work early 2011. Target to have 75% of all green field sites be prepared for digital technology by 2011.

Ref	Strategic Projects and Tasks	Target
Objective: Improved accessibility and affordability of digital services		
3	Project: Dunedin Wireless (wifi) Network². Project to establish a central city and outlying suburbs wireless (wifi) network to improve the accessibility to digital networks across the community. Project to include:	Currently, only 20% of the city has access to wireless services. Target of 100% of central Dunedin City from Port Chalmers to Dunedin

² It is to be noted that any wireless or cellular installation undertaken by a third party, in support of the Digital Strategy, will follow the Ministry of Health's recommended health standards at that time.

	1) Review the best options for installing a Dunedin wireless network that will achieve the highest degree of cover whilst delivering a high quality and consistent service to the community and visitors to the city. Review to consider: most suitable technology to be used, location of wireless devices that are aesthetically pleasing and the service level standards to be achieved. 2) Review current commercial and wireless network providers in Dunedin and strive for partnerships to achieve a single service across the community. Focus on presenting the 'Dunedin City Portal' (Project Ref 6) website as the first service available when connecting to the Dunedin Wireless Network. 3) Review on how a "free service" can be provided. This may identify that free services are provided for a period of time or within a restricted data download limit. To exceed these limits charges may apply presenting an opportunity to offset the costs for the service.	<i>Airport) to have access to have access to fast, high quality, wireless services by 2012.</i> <i>Six rural communities to have access to wireless services by 2012 with a programme of work extending this figure to 10 by 2014.³</i> • Implementation of wireless service to start in 2011. • Deliver a service that is affordable whilst maintaining quality and functionality.
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³ The locations are to be decided through ongoing consultation and the availability of backhaul access.

2.2 Content: Strategic Projects

Area	Strategic Goal and Objectives
A Digitally Enabled City	A Digitally Enabled City to deliver more digital content to the community, visitors and businesses across the city and develop Dunedin as a centre for digital innovation <i>Objective:</i> ○ Develop an environment that fosters and encourages digital creativity; ○ Focus on increasing the delivery of community services through digital technology.

Ref	Strategic Projects and Tasks	Target
Objective: Develop an environment that fosters and encourages digital creativity		
4	Leadership: Digital Innovation Advisory Group Establish a Digital Innovation Advisory Group who will lead the development of digital innovation across the city. This will include engaging more closely with the University of Otago\Otago Polytechnic to understand what is needed to attract and retain future entrepreneurs in the city and what services will assist new start-up businesses to prosper. These services may include: providing free access to technology, business support and mentoring services and guidance from the city's "ICT Heroes"⁴ on how to grow a business. The key responsibilities of this leadership group will be: Lead the development of digital innovation across the city and lead initiatives to retain and attract new digital businesses to the city. This includes: 1) Improve the attractiveness of the city by promoting the digital opportunities in the city and highlight our local success stories. 2) Work with our sister city on digital innovation opportunities and growing international business opportunities. 3) Provide services (like mentoring) to assist new digital businesses to grow and prosper. 4) Support the Council's Economic Development Unit (EDU)	• Currently 34% of those surveyed believe Dunedin is a centre for digital innovation. Target is to increase this to 65% by 2014. Target to increase technology GDP by 20% by 2014 as measured by the BERL report⁵.

⁴ ICT Heroes refers to the entrepreneurs in the city who have successfully grown international businesses (refer to section 2.1.4, section 2 of the Dunedin Digital Strategy)

⁵ BERL report assesses the economic value of sectors within Dunedin. The target to increase the GDP by 20% will be agreed with the Economic Development Unit at the Council.

	projects including; ICT internships, technology precinct and other initiatives within the city. 5) Provide access to technology (like free internet access or data centre hosting) to kick start new digital businesses and help them grow.	
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Ref	Strategic Projects and Tasks	Target
Objective: Focus on increasing the delivery of community services through digital technology		
5	Project: Dunedin Online Project to increase the Council services available online to the community and provide new digital services to communicate and engage with the community. Project to include: 1) Increasing Councils services available online to the community with a focus on online payments, RSS feeds, social networking services and online forms to improve the customer experience and engagement with the community. It is recommended that an annual review is completed to assess what digital services the community wish to see. 2) Increased transparency of Council information and processes available to the community including reviewing how eDemocracy⁶ can be used to build stronger relationships between the community and Council. 3) Supporting the Dunedin City portal (Project Ref 6) by providing content to support this service.	- Limited online content available to the community. Target to increase Council online services by 50% by 2012. With a focus on online payments, social networking services and online forms. - Annual review of what services the community wish to see. - Increased transparency on Council information.

⁶ eDemocracy refers to using digital services for political and governance processes.

6	Project: Dunedin City Portal Project to establish a ‘Dunedin City Portal’ to integrate information across separate online websites within a single digital entity. This will involve working with Dunedin Brand partners, Dunedin City Council and key community stakeholders to create a single portal for the city. The portal will centralise and integrate community information, provide details on the attractions and events in the city and showcase digital innovation. A service that promotes the city, increases the visibility of city events, promotes businesses and the community services available. Portal aims are: 1) Integrate information across separate online websites within a single entity. This includes information for students, businesses, visitors and the community. 2) Support the brand ‘Dunedin’ by creating a one-stop-shop for city information. 3) Improve the promotion of the city and increase visibility of city events and community services. 4) Showcase digital innovation across the city through a dynamic and stimulating digital service whilst also informing the community on what digital services are available. This project is linked to Project Ref 3 as it is recommended that this service will be the first ‘port of call’ when using the wireless network.	• Currently online services operate independently. <i>Target is to have the Dunedin City Portal established by 2011 and integrated into the central city wireless network.</i> • Annual review to assess services provided by the portal and what services the community wish to see in the future.
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2.3 Capability: Strategic Projects

Area	Strategic Goal and Objectives
A Digitally Capable City	A Digitally Capable City to raise the level of knowledge, literacy and skills to use digital technology across the community, business and service sectors <i>Objective:</i> ○ Raise capability across the community through greater access to digital technology and digital services; ○ Improve knowledge and skills across the City through education, advice and awareness campaigns.

Ref	Strategic Projects and Tasks	Target
Objective: Raise capability across the community through greater access to digital technology and digital services		
7	Project: Digital Technology A project to increase the access to digital devices across the community and at schools. Project is focussed on the following groups: 1) Families with the greatest need that have no access to computers or digital services at present. 2) Schools that have limited access to digital technology like interactive whiteboards or mobile devices (ipads or laptops). Project to be achieved through the following initiatives: 1) Establishing a 'Computer in Homes initiative' to provide computers to disadvantaged families or community groups that have no access to computers at present. This includes providing training and assistance to use the computers well. 2) Creating an active partnership with commercial vendors to sponsor technology within a school or community group. This may be in the form of computer hardware, interactive white boards or services to access the internet. 3) Seek grants to purchase, upgrade or maintain digital technology. 4) Establish a computer broker service to allow businesses or individuals that no longer required a computer to donate this to school or a family that is in need. In addition, as part of the project the following initiatives are	• Many schools, communities and families have limited access to digital technology. <i>Target to provide a minimum of 100 digital devices to those schools, families or community groups that need assistance, per year, from 2011.</i> • Encourage the use of open source software to reduce technology costs. • Encourage more re-use and recycling of digital devices.

	included: 5) Increase awareness on open source software and benefits to the community as an alternative to reduce technology costs. Support the development of a Dunedin Open Source repository and distribution media (e.g. DVD). 6) Promote initiatives to encourage the recycling and re-using of digital technology across the community, schools and business sectors.	
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Ref	Strategic Projects and Tasks	Target
Objective: Improve knowledge and skills across the City through education, advice and awareness campaigns		
8	Project: Computer Club House Project to review the opportunity to establish a 'Computer Club House' or similar initiative within the city. Objective is to establish a centre to provide access to digital technology to members of the community who have little exposure at present. The Club House is aimed at providing an opportunity for young people to learn about digital services in a stimulating and creative environment. Adult mentors are on hand to guide and support those who use the facility. The goal of the project is to establish a Computer Club House or similar initiative and support this facility as a longer term community asset. This project will also demonstrate the city's commitment to raising capability across the community. Project will review: 1) Financial investment required establishing a Computer Club House and the ongoing financial support required. 2) Opportunities for sponsorship both locally and nationally. 3) Location of Club House or Club Houses, for example: Dunedin City Library, Community Learning Centre or at a school. 4) Review of other Club Houses operating in NZ and overseas and determining what makes them successful. 5) What digital services (for example building robots or making a video recording) could be offered and what skills are available locally to assist with the project.	Limited community focussed services to support raising digital capability. Target to have Computer Club House or similar initiative operating by 2013.
9	Project: Digital Ambassadors Project to review the opportunity to appoint 'Digital Ambassadors' across the city. This role will provide advice and guidance on digital services to the not-for-profit, small business, tourism and other	Currently a low level of capability report across small business and not for profit sectors.

	sectors across the city. The objective is to raise the digital awareness and capability across the city through a community based service. The goal is to improve the level of understanding and provide impartial advice to assist these sectors on the use of digital services and improve skills on digital technology. Project will review: 1) Financial support required for the scheme to operate and the ongoing financial support required. 2) Identify who will commit to support this service across the academic and professional ICT bodies in the city. 3) Identify a location and operating model to be followed (potentially based on the community law principles). 4) Review how this initiative could be linked to the Computer Club House project described in Project Ref 8 and other digital services discussed in this strategy.	• 27% of residents report no capability to access digital services. Target a 50% improvement in capability across the city to reduce the current target to 15% by 2013. Digital Ambassador operating by 2011.
10	Project: Digital Literacy Project to raise the level of digital literacy across the community by providing practical examples of how digital services can benefit the community. The project also aims to encourage the digital literacy services currently operating in the city. Project will review: 1) Opportunities to promote the current digital literacy initiatives in the city to increase the skills in understanding, creating and using digital services. 2) Methods to develop 'practical' examples of how digital services can help the community (create the need to participate in digital networks.) 3) Collaborate with other professional bodies on delivering digital literacy programmes for the community. 4) Review how this initiative could be linked to the Computer Club House project described in Project Ref 8 and other digital services discussed in this strategy.	• Currently there are isolated digital literacy programmes operating. Target to have a digital literacy programme operating (and integrated within other Digital Strategy projects) by 2012.

2.4 Confidence: Strategic Projects

Area	Strategic Goal and Objectives
A Digitally Confident City	A Digitally Confident City to increase assurance that digital services are safe and reliable for residents to fully embrace and participate in <i>Objective:</i> Educate, promote and provide assistance on the safe use of digital services across the community.

Ref Plan	Strategic Projects and Tasks	Target
Objective: Educate, promote and provide assistance on the safe use of digital services across the community		
11	Project: Digital Safe Use Campaign Project to promote the safe participation in digital services and raise digital confidence across the city. Project will lead a Digital Safe Use Campaign to advise on the safe practices for connecting, using and participating in digital services. This may include providing online courses, courses at learning centres (like those provided by Otago Polytechnic), technology 'boot camps' and promoting best practices through publications like CityTalk (a DCC publication). In addition, input from community groups and law enforcement agencies will drive what content is to be delivered to reflect the concerns of parents, community leaders and educational professionals. Project will review: - Current risks when using digital services and what issues the community, parents and businesses are concerned about. - Mechanisms available to promote safe practices, for example: online advisory services, publications and events. - Ongoing financial commitment for promoting digital safe use on an annual basis. - Review what services are currently operating and opportunities for collaboration on digital safe use campaigns.	- Promote safe use of digital services across the community and raise digital confidence. - Currently 34% of residents surveyed confidently use digital services. Target is to increase this to 60% by 2012.
12	Project: Digital Help Desk Project to increase the community's confidence in accessing and	Currently only 34% have confidence in digital services.

	using digital services. The Council's Customer Services Agency help desk is ideally suited to provide this service responding to requests for assistance by phone, through email and in person. The goal is to support the community by providing a Help Desk service that will provide: 1) Advice on best practices to be followed when using digital services; this may well be in the format of help sheets that residents can download or receive through the mail; 2) Advice on community based courses available (Project Ref 8). 3) Guidance on how to access Council digital networks (like the wireless network discussed in Project Ref 3). 4) Point of contact that visitors can use to enquire about digital services. 5) Promote local ICT businesses that can assist with digital services. 6) Advice on re-use and recycling of digital technology. Project will review: 1) What is required to establish a Digital Help Desk to operate through the Council's Customer Services Agency. 2) What information is required and from what sources to support the Help Desk role. 3) Training requirements for Customer Services Agency staff.	<i>Target to increase levels of confidence in digital services to 60% by 2012.</i> • Provide an advisory point of contact to support access and use of Council digital services. • Provide a service for tourists and visitors to access. • Digital Help Desk service operating by 2011.
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The is the end of Section Three

Section Four is 'The Plan'.

Recommends an action plan to implement the Dunedin Digital Strategy.

Includes recommendations on which projects should start first, who should lead them and who should be involved



Dunedin Digital Strategy 2010 to 2013



SECTION FOUR: THE PLAN

How to read this document

This is **Section Four** of the Dunedin Digital Strategy

There are four sections within the Strategy. Each section builds upon the previous section to provide a detailed report on the digital opportunity, strategy and implementation plan.

SECTION ONE – FAST TRACK

An overview of the Dunedin Digital Strategy from start to finish.

This document summarises Sections Two to Four.

SECTION TWO – THE OPPORTUNITY

The key opportunities for visitors, residents, businesses and students across the four key strategic themes of: connection, content, capability and confidence.

SECTION THREE – THE STRATEGY

The Dunedin Digital Strategy.

The strategic vision and goals and the projects required to deliver the Digital Strategy.

SECTION FOUR – THE PLAN



You are here

Recommends an action plan to implement the Dunedin Digital Strategy.

Includes recommendations on which projects should start first, who should lead them and who should be involved.

Strategy prepared by: Stuart Dillon-Roberts

stuart@effectus.co.nz



The 'tag cloud' image on the front cover of this report records many of the key words raised during the Dunedin Digital Strategy consultation

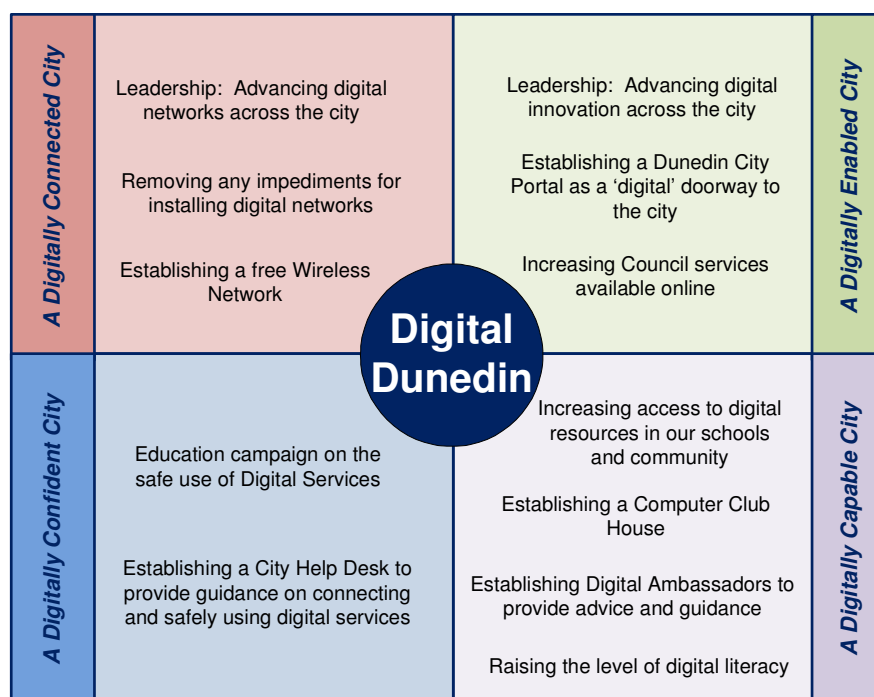
1 DIGITAL STRATEGY PLAN

The Dunedin Digital Strategy is an ambitious plan. Across the four themes of connection, content, capability and confidence a number of projects are recommended and advisory groups to be created to provide leadership on digital initiatives. These projects and initiatives will need to be prioritised, funded, and commitments made.

The strategy has been developed in consideration of the comments raised during the consultation process.

During the consultation we listened to the comments made and didn't develop a strategy that was solely focussed on laying more fibre optic cable or promoting a particular digital technology. But rather we focused on a strategy that will deliver benefits across all of the four Cs: connection, content, confidence and capability as the graphical insert demonstrates.

The Dunedin Digital Strategy has been developed to bring long term social, economic and financial benefits across the community and businesses in the city.



The consultation also highlighted that the responsibility for the digital strategy doesn't fully lie with the Council and there was strong support for the community to be involved in the implementation process.

This is what you said:

"To be successful this needs to be driven by the community not just the Council" Resident, Dunedin

"Get the community involved in this exciting project" Community Leader, Dunedin

The Council needs to be commended for instigating this strategy and it certainly has a role to play in the implementation stage with assistance from the community, businesses, academic institutions and other interested parties.

There was also strong support for the implementation to start quickly. The view was that Dunedin is already behind other cities and the implementation of the Digital Strategy needs to start as soon as possible - before we fall even further behind.

This is what you said:

"We need action now not just talk", Business Owner, Dunedin

As a consequence *The Plan*, this section, recommends how the Dunedin Digital Strategy will be implemented. This includes recommendations on what projects will start first, who will lead the projects and who should be involved in the project teams. This section also provides a timeline indicating when projects should start over the 2010 to 2013 period.

But STOP!



This section is the *recommended* plan to lead, govern and implement the Digital Strategy. Further work is required once the Digital Strategy has been endorsed to agree a final implementation plan, determine how the projects will be funded and confirm the resources required.

Recommended Plan

2 RECOMMENDED IMPLEMENTATION PLAN

2.1 Prioritisation

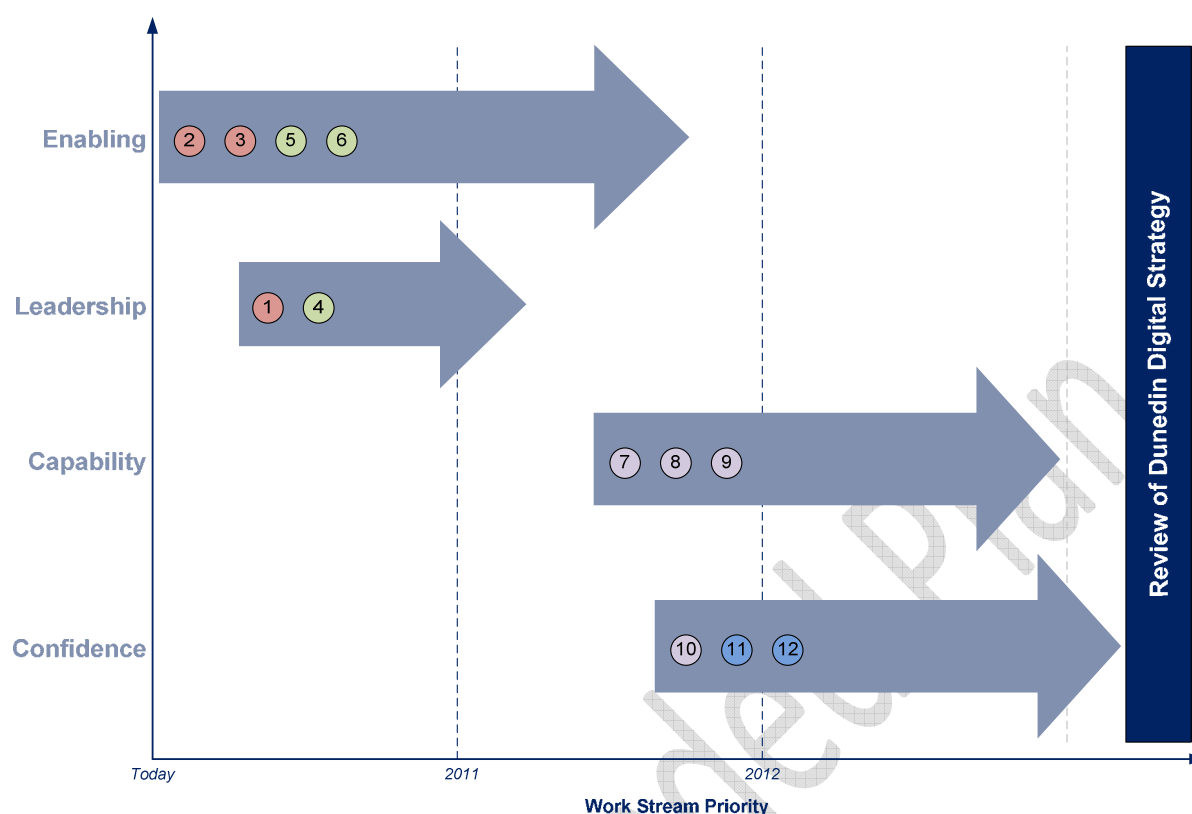
The Dunedin Digital Strategy includes 10 projects and 2 advisory groups. To simplify the implementation process it is recommended that the Digital Strategy projects are grouped into four work streams: *Leadership, Enabling, Capability and Confidence*. Each work stream contains a number of digital strategy projects that have similar outcomes or are aligned across a common theme. A clear message during the consultation process was that all the projects needed to be completed to meet the goals of the Digital Strategy. It is therefore recommended that the Digital Strategy projects are prioritised and the most pressing of projects are started first.

The four work streams recommended and the projects within each of the work streams are summarised in the table below.

Work Streams	Proj. Ref	4 Cs	Project Description
Leadership	1	Connection	Digital Networks Advisory Group established to lead discussions on improving digital networks in the city and access international digital networking.
	4	Content	Digital Innovation Advisory Group established to lead initiatives that will provide economic benefit to the city.
Enabling	2	Connection	Digital Roadblocks project to prepare the city by identifying where digital infrastructure is required for future digital networks.
	3	Connection	Dunedin Wireless Network project to implement a wireless service (wifi) across the central city and outlining suburbs to improve accessibility to digital networks across the city.
	5	Content	Dunedin Online project to increase the online services provided by the Council to the community, visitors and businesses across the city.
	6	Content	Dunedin City Portal project to establish a 'Dunedin City Portal' to integrate information across separate online websites within a single digital entity.
Capability	7	Capable	Digital Technology project to increase the number of digital devices available across the community, families and at schools. Promote open source solutions and re-using/recycling of technology.
	8	Capable	Computer Club House established. A community based Computer Club House (or similar initiative) to provide access to digital technology to members of the community who have little exposure at present.
	9	Capable	Digital Ambassadors to improve digital capability across community, not for profit and small businesses sectors.
	10	Capable	Digital Literacy project to raise the level of digital literacy across the community.
Confidence	11	Confidence	Digital Safe Use project to establish an educational campaign to promote safe use of digital technology.
	12	Confidence	Digital Help Desk project to provide advice and guidance on connecting and using digital services.

The *Enabling* work stream has been identified as the highest priority work stream. This work stream includes 4 projects which have been categorised as the highest priority to establish the core infrastructure and to increase the availability of digital services across the community.

The other work streams have been prioritised as indicated in the diagram below.



The prioritisation of these work streams will need further work as the priority will be influenced by the availability of resources and funding. However, ideally the work streams will follow the recommended prioritisation illustrated above.

2.2 Timeline

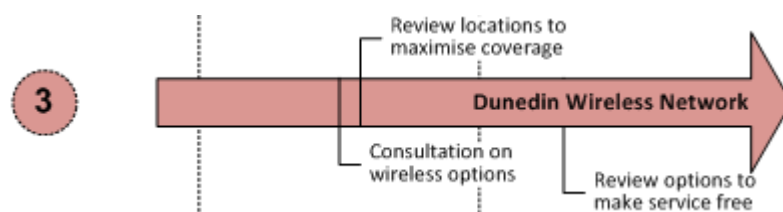
The Digital Strategy has a three year timeline. Over the period 2010 to 2013 the Digital Strategy projects and advisory groups will be formed, projects initiated, the community further consulted and projects implemented. It is recognised that technology moves at a fast pace; what we believe is required to achieve a *Digital Dunedin* may well be different in years to come. It is therefore recommended that the Dunedin Digital Strategy is reviewed in three years time. This is a shorter period than most strategies to reflect that technology and community needs may well change in the near future.

The review timeframe is three years from the strategy being approved by the Council. If this is late in 2010 then the review should be completed late 2013.

2.2.1 Recommended Projects' Roadmaps

To further support the implementation process high-level project roadmaps are included within this section. They serve to guide on the activities to be followed once the Digital Strategy has been endorsed and the implementation stage starts.

For each project a start time and end time is shown and the key activities to be completed over this timeframe. An example is shown below:



The dates indicated on the roadmaps will need to be confirmed once the Digital Strategy has been endorsed and the implementation stage starts. They do, however, provide a target for each project to aim for.

The roadmaps for each project within the four work streams can be found in the Appendices referenced below:

Work Stream	Appendix Reference
Enabling	Appendix A, section 4.1
Leadership	Appendix A, section 4.2
Capability	Appendix A, section 4.3
Confidence	Appendix A, section 4.4

2.3 Community Participation

Collaboration and community consultation were key messages raised throughout the Digital Strategy consultation process. It is important that the community consultation continues and that the community, businesses, academic institutions and specialists are consulted across all projects.

The table below details the recommended parties that should be included within each implementation process. Many of those indicated in the table have already offered assistance or demonstrated a willingness to contribute to the implementation process.

Work Stream	Project Ref	4 Cs	Contributors	Project Description
Leadership	1	Connection	Membership recommended in section 3.1.2	Digital Networks Advisory Group established to lead discussions on improving digital networks in the city and access international digital networking.
	4	Content	Membership recommended in section 3.1.3	Digital Innovation Advisory Group established to lead initiatives that will provide economic benefit to the city.
Enabling	2	Connection	- Technology providers to be consulted - Benchmark against other Councils	Digital Roadblocks project to prepare the city by identifying where digital infrastructure is required for future digital networks.
	3	Connection	- Community groups in city - Commercial vendors and academic institutions (as required) who provide wireless services at present - Tourism sector	Dunedin Wireless Network project to implement a wireless service (wifi) across the central city and outlining suburbs to improve accessibility to digital networks across the city.

Work Stream	Project Ref	4 Cs	Contributors	Project Description
			Specialist technology advice (as required) to support the decision on what technology to use (e.g. WiMax)	
	5	Content	- Consult with community on which services are the priority - Benchmark against other Councils - Library Representative	Dunedin Online project to increase the online services provided by the Council to the community, visitors and businesses across the city.
	6	Content	- Tourism Dunedin and Tourism representative - Brand Partners - i-site team to represent visitors interests - Council: BIS and Marketing Activity Area representative - Community Groups - University and Polytechnic - DVML representative	Dunedin City Portal project to establish a 'Dunedin City Portal' to integrate information across separate online websites within a single digital entity.
Capability	7	Capable	- Education representatives to assist with project - Businesses to review partnerships opportunities - Community Trust representative - Computers in Home scheme representative in Dunedin - Cargill Enterprises regarding discussions on re-using and recycling projects	Digital Technology; project to increase the number of digital devices available across the community, families and at schools. Promote open source solutions and re-using/recycling of technology.
	8	Capable	- Advice from computer club house NZ - Community groups to assess needs - University and Polytechnic representatives - Library member - Community Trust representative	Computer Club House established. A community based Computer Club House (or similar initiative) to provide access to digital technology to members of the community who have little exposure at present.
	9	Capable	- Community Trusts representative - University and Polytechnic representatives - Specialist Advice	Digital Ambassadors to improve digital capability across community, not for profit and small businesses sectors.
	10	Capable	- Community learning Centers representative - Libraries representative - Polytechnic Representative - NZ ICT representative for 'kiwi skills' collaboration	Digital Literacy project to raise the level of digital literacy across the community.
Confidence	11	Confidence	- Education providers in the city - Community Groups to assess needs - Netsafe organisation - Law enforcement agencies	Digital Safe Use project to establish an educational campaign to promote safe use of digital technology.
	12	Confidence	Community Group to assess needs	Digital Help Desk project to provide advice and guidance on connecting and using digital services.

2.4 Funding

As yet, there is no committed funding for the Digital Strategy. Further work is required to define how the projects will be funded and what opportunities there are both locally and nationally to support the strategy. This may include seeking financial support from local businesses, technology companies, government agencies, trusts and local or regional Councils. A key part of the implementation plan for each project will be to review funding opportunities.

At a high level an estimate for each project has been indicated in the table below. This serves to guide on the costs associated with each of the Digital Strategy projects. These financial estimates have been made following consultation with technology providers and through comparison to similar projects.

Estimated costs are broken down into four categories:

Less than \$50,000
Between \$50,000 to \$100,000
Between \$100,000 to \$500,000
Greater than \$500,000

Work Streams	Proj. Ref	4 Cs	Project Description	Financial Estimates
Leadership	1	Connection	Digital Networks Advisory Group established to lead discussions on improving digital networks in the city and access international digital networking.	Less than \$50,000 to operate the Advisory Group. If no Government funding is forthcoming this will increase to over \$500,000.
	4	Content	Digital Innovation Advisory Group established to lead initiatives that will provide economic benefit to the city.	Less than \$50,000 to operate the Advisory Group.
Enabling	2	Connection	Digital Roadblocks project to prepare the city by identifying where digital infrastructure is required for future digital networks.	Between \$100,000 to \$500,000.
	3	Connection	Dunedin Wireless Network project to implement a wireless service (wifi) across the central city and outlining suburbs to improve accessibility to digital networks across the city.	Between \$100,000 to \$500,000.
	5	Content	Dunedin Online project to increase the online services provided by the Council to the community, visitors and businesses across the city.	Less than \$50,000.
	6	Content	Dunedin City Portal project to establish a 'Dunedin City Portal' to integrate information across separate online websites within a single digital entity. Integrate service to Dunedin Wireless Network.	Between \$50,000 to \$100,000.

Work Streams	Proj. Ref	4 Cs	Project Description	Financial Estimates
Capability	7	Capable	Digital Technology project to increase the number of digital devices available across the community, families and at schools. Promote open source solutions and re-using/recycling of technology.	Between \$100,000 to \$500,000.
	8	Capable	Computer Club House established. A community based Computer Club House (or similar initiative) to provide access to digital technology to members of the community who have little exposure at present.	Greater than \$500,000.
	9	Capable	Digital Ambassadors to improve digital capability across community, not for profit and small businesses sectors.	Between \$100,000 to \$500,000.
	10	Capable	Digital Literacy project to raise the level of digital literacy across the community.	Between \$50,000 and \$100,000.
Confidence	11	Confidence	Digital Safe use project to establish an educational campaign to promote safe use of digital technology.	Between \$50,000 and \$100,000.
	12	Confidence	Digital Help Desk project to provide advice and guidance on connecting and using digital services.	Less than \$50,000.

3 LEADERSHIP AND GOVERNANCE

The recommended leadership for implementing the Dunedin Digital Strategy falls to the Dunedin City Council; Advisory Groups outlined in the strategy and community groups across the city. The ongoing governance role to steer how the strategy is implemented is to be decided, but it is recommended that the current Digital Strategy Steering Team continue to fulfil this role.

3.1 Roles and Responsibilities

3.1.1 Digital Strategy Steering Team

The Digital Strategy Steering Team, at the time of developing this report, includes representatives from key stakeholder groups across the city and is chaired by a nominated Councillor. Membership is as follows:

Capability Theme	Area of Interest	Name
Connection	Dunedin City Council Chief Executive	Jim Harland
Connection	Dunedin City Council, General Manager Customer Services	Grant Strang
Confidence	Dunedin City Councillors	Cr Dave Cull (Chair), Cr Chris Staynes (Deputy Chair)
Confidence	Infrastructure Enabler, Chief Executive, Delta	Grady Cameron
Content	ICT Cluster Member representatives	Stuart Fleming, Gary Taiaroa
Content	Content Provider - Health Sector	Sarah Kalmakoff / Rene Ngatai
Content	Content Provider – Education, Chief Information Officer, University of Otago	Mike Harte
Confidence	Otago Community Trust, Content Provider-Secondary Education	Peter Hills
Content	Content Provider – Education, Chief Information Officer Otago Polytechnic	Mike Collins

Digital Strategy Steering Team as of 1 February 2010

The role of the Digital Strategy Steering Team has been primarily to develop the Dunedin Digital Strategy. This team are to be commended for their role in steering the development of the city's first Digital Strategy.

This group has provided advice and guidance as the Digital Strategy has been developed. Following acceptance of the strategy it is recommended that this team continues to fulfil a governance role whilst the implementation plan is developed, funding opportunities identified and resources confirmed.

3.1.2 Digital Networks Advisory Group

The Digital Networks Advisory Group is a key advisory group identified within the Digital Strategy providing specialist advice on the development and advancement of digital networks across the city. This group will engage with government agencies, commercial vendors and other Councils to deliver the targets outlined in the Digital Strategy. This group will also take on the role of lobbying for improved backhaul to the city with a mandate to inform the community of digital networking changes across the city.

The recommended membership of this advisory group is:

Suggested Member	Suggested Role
Economic Development Unit (Dunedin City Council)	- Chair of Advisory Group - Link between Council and Advisory Group
KAREN representative	Representing the views of the education and science community and interface with the KAREN digital network
Education representative	Representing the views of education and interface to the NEN digital network
Business Sector	Representatives from the business sector
Chamber of Commerce	Represent businesses across the City
Commercial Vendors	As required

3.1.3 Digital Innovation Advisory Group

The Digital Innovation Advisory Group identified within the Digital Strategy will focus on providing advice and leading initiatives to promote the city, create an environment that supports digital innovation and provide services to assist start-up digital businesses.

This is a key advisory group and the recommended membership of this group is:

Suggested Member	Role
Economic Development Unit (Dunedin City Council)	Link between Council and Advisory Group
University of Otago and Otago Polytechnic members	- Retaining skills within City - Encouraging student start-ups businesses and keeping them within the City
Innovation Centre	- Promotion of innovation services within City - Technology and support services required to assist start-up businesses
Chamber of Commerce	- Integration within business sector - Up skilling business skills and mentoring opportunities

Suggested Member	Role
ICT Business Sector	- Mentoring opportunities - Advising new start-ups

3.2 Leadership

Leadership of the Dunedin Digital Strategy will fall to both the Dunedin City Council and the wider Dunedin community. The projects each of these groups will lead is discussed in this section of the strategy.

3.2.1 Dunedin City Council

It is recommended that following approval of the Digital Strategy, that the Council leads those projects in the Digital Strategy that are directly Council related. A nominated General Manager has been recommended to lead these projects within the respective activity areas of the Council. The projects under Council leadership and the nominated General Manager to lead these projects is defined in the table below:

Work Streams	Proj. Ref	4 Cs	Project description
Enabling	2	Connection	Digital Roadblocks Project Goal 1: The Council to provide leadership in establishing the digital infrastructure needs of the City through: - Identifying the digital infrastructure standards necessary for the City; - Preparing a 'digital infrastructure map' of the city to show where the digital infrastructure (like fibre ducting) has been installed across the city and make this information available to all commercial vendors; - Identifying where that digital infrastructure is required to support digital networks in the future; <i>Project led by General Manager Customer Services</i> Goal 2: The Council to deliver mechanisms for facilitating the installation of digital infrastructure through: - Including networking infrastructure in the code of subdivision and district plans to prepare 'green field' sites and support faster implementation of digital networks; - Defining standards and installing network infrastructure as part of the continuing and scheduled programme of work at the Council (e.g. Roading, water and waste); <i>Project led by General Manager City Environment and Strategy and Development.</i>
	5	Content	Dunedin Online Project Goal: Increase the online services available to the community, visitors and businesses across the city. Increasing Councils services available online to the community with a focus on online payments, RSS feeds, social networking services and online forms.

Work Streams	Proj. Ref	4 Cs	Project description
			- Increased transparency of Council information and processes available to the community including reviewing how eDemocracy can be used to build stronger relationships between the community and Council. - Providing online content to support the Dunedin City portal. <i>Project led by General Manager Customer Services</i>
	6	Content	Dunedin City Portal Project to establish a 'Dunedin City Portal' to integrate information across separate online websites within a single digital entity. This will involve working with Dunedin Brand partners, Dunedin City Council and key community stakeholders to create a single portal for the city. The portal will centralise and integrate community information, provide details on the attractions and events in the city and showcase digital innovation. A service that promotes the city, increases the visibility of city events, promotes businesses and the community services available. Portal aims are: - Integrate information across separate online websites within a single entity. This includes information for students, businesses, visitors and the community. - Support the brand 'Dunedin' by creating a one-stop-shop for city information. - Improve the promotion of the city and increase visibility of city events and community services. - Showcase digital innovation across the city through a dynamic and stimulating digital service whilst also informing the community on what digital services are available. <i>Project led by General Manager Strategy and Development</i>
Confidence	12	Confidence	Digital Help Desk Project to increase the community's confidence in accessing and using digital services. The Council's Customer Services Agency help desk is ideally suited to provide this service responding to requests for assistance by phone, through email and in person. The goal is to support the community by providing a Digital Help Desk service that will provide: - Advice on best practices to be followed when using digital services. - Advice on community based courses to attend (Project Ref 10). - Guidance on how to access Council digital networks (like the wireless network discussed in Project Ref 3). - Point of contact that visitors can use to enquire about digital services in the city; - Advice on e-recycling of digital technology. - Promoting Dunedin ICT businesses that can assist with digital services. Project will review: - What is required to establish a Digital Help Desk to operate through the Council's Customer Services Agency. - What information is required and from what sources to support the Help Desk role. - Training requirements for Customer Services Agency staff. <i>Project led by General Manager Customer Services</i>

3.3 Community Leadership

Digital Strategy projects shown in the table below have strong ties to the community and during the consultation process there was strong support for these to be led independently from the Council. It is recommended that these are led through a community entity.

Work Streams	Proj. Ref	4 Cs	Project description
Enabling	3	Connection	Dunedin Wireless Network project to implement a wireless service (wifi) across the central city and outlining suburbs to improve accessibility to digital networks across the city.
Capability	7	Capable	Digital Technology project to increase the number of digital devices available across the community and to schools.
	8	Capable	Computer Club House established. A community based Computer Club House (or similar initiative) to provide access to digital technology to members of the community who have little exposure at present.
	9	Capable	Digital Ambassadors to improve digital capability across community, not for profit and small businesses sectors.
	10	Capable	Digital Literacy project to raise the level of digital literacy across the community.
Confidence	11	Confidence	Digital Safe Use project to establish an educational campaign to promote safe use of digital technology.

Through discussions with the Digital Strategy Steering Team, two options for leadership of the community projects are preferred. One option is to establish a *Dunedin Digital Office* the other, to establish a *Dunedin Digital Trust*.

Both of these options will need to be reviewed in more detail and a decision made of the most suitable solution to deliver the Digital Strategy projects.

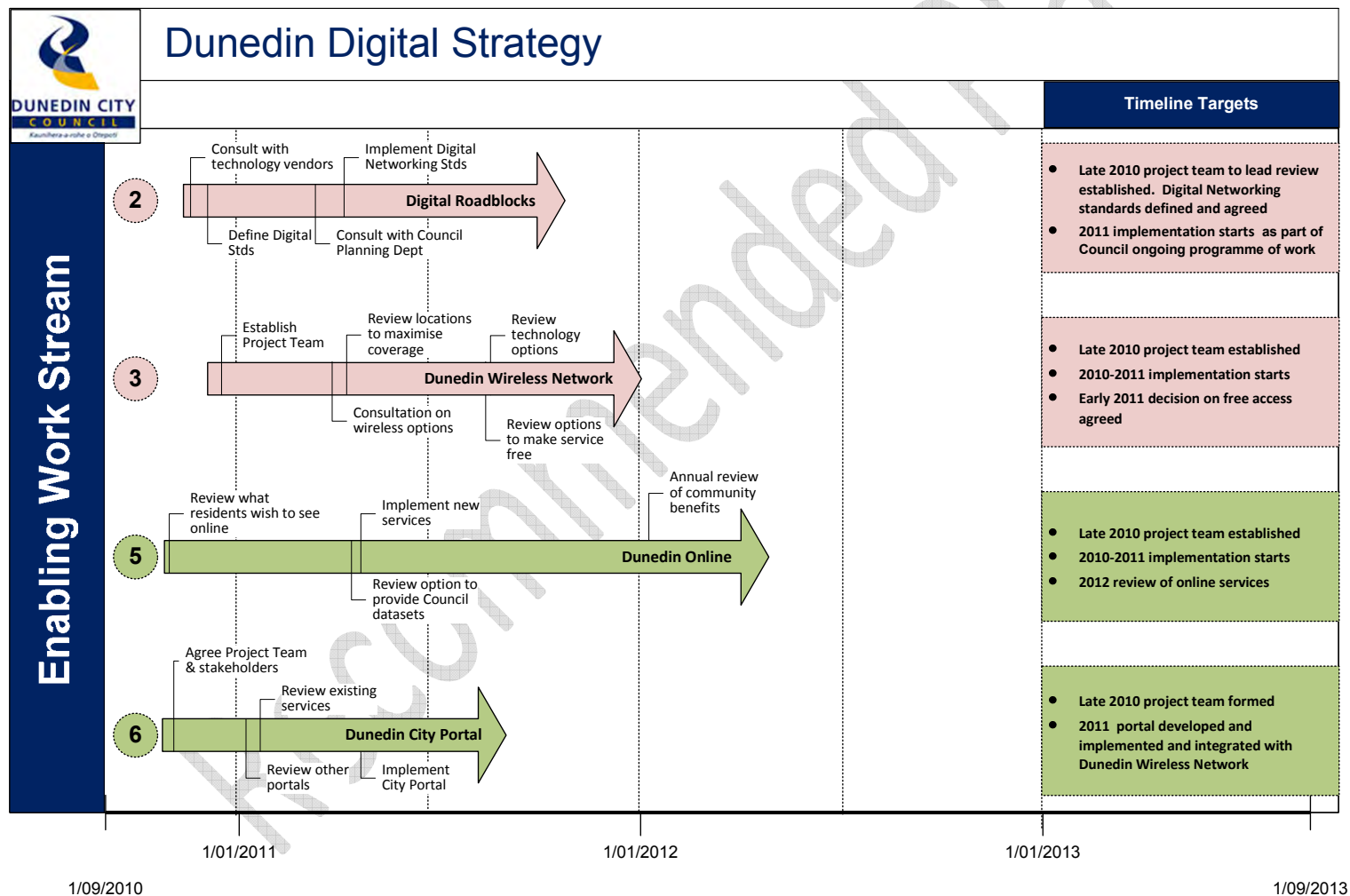
The is the end of Section Four

This is the final section in the Dunedin Digital Strategy. A summary of all sections can be found in Section One “Fast Track”.

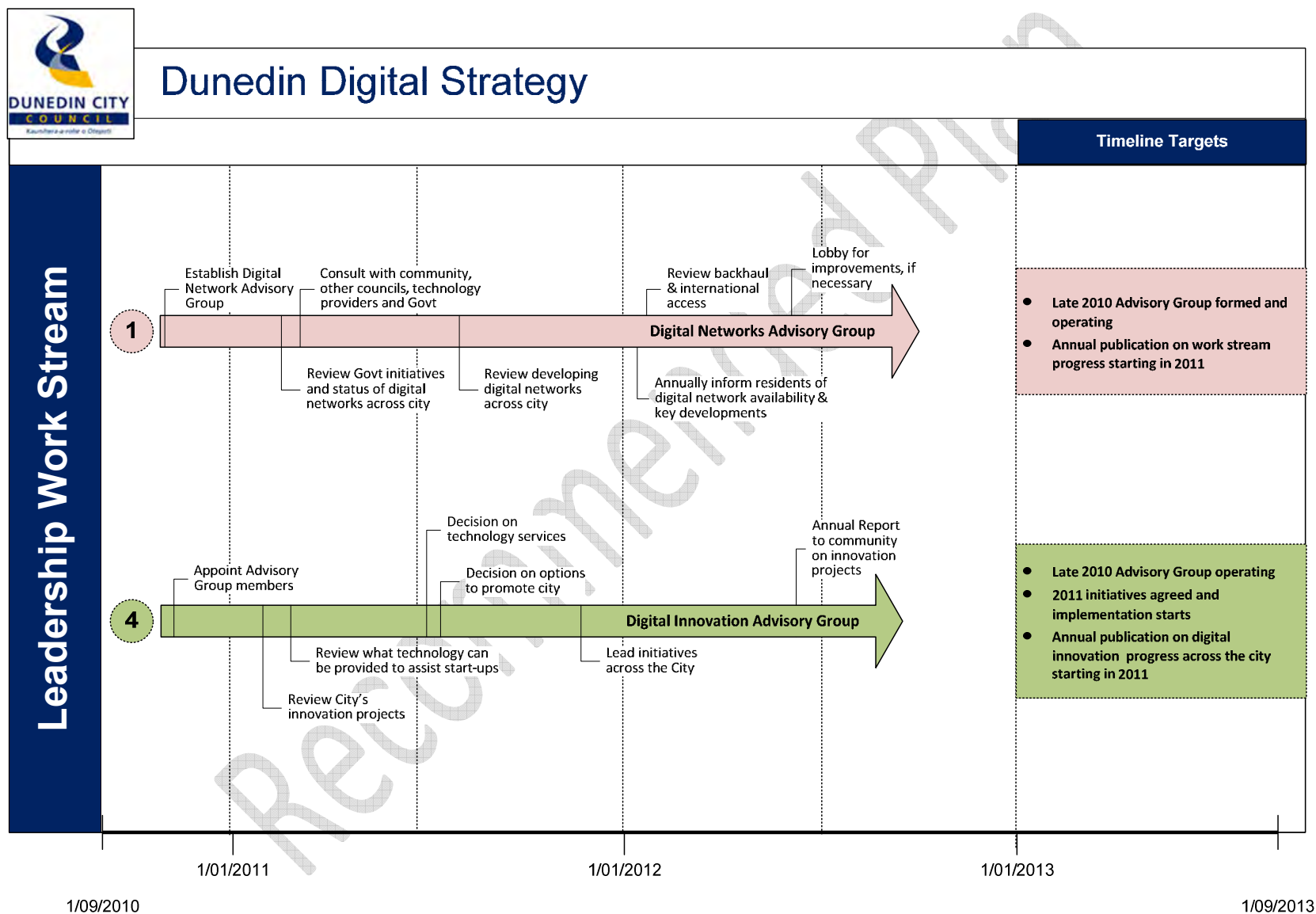
4 APPENDIX A: RECOMMENDED ROADMAPS

The following roadmaps depict the high-level timeframes and milestone for each of the four work streams.

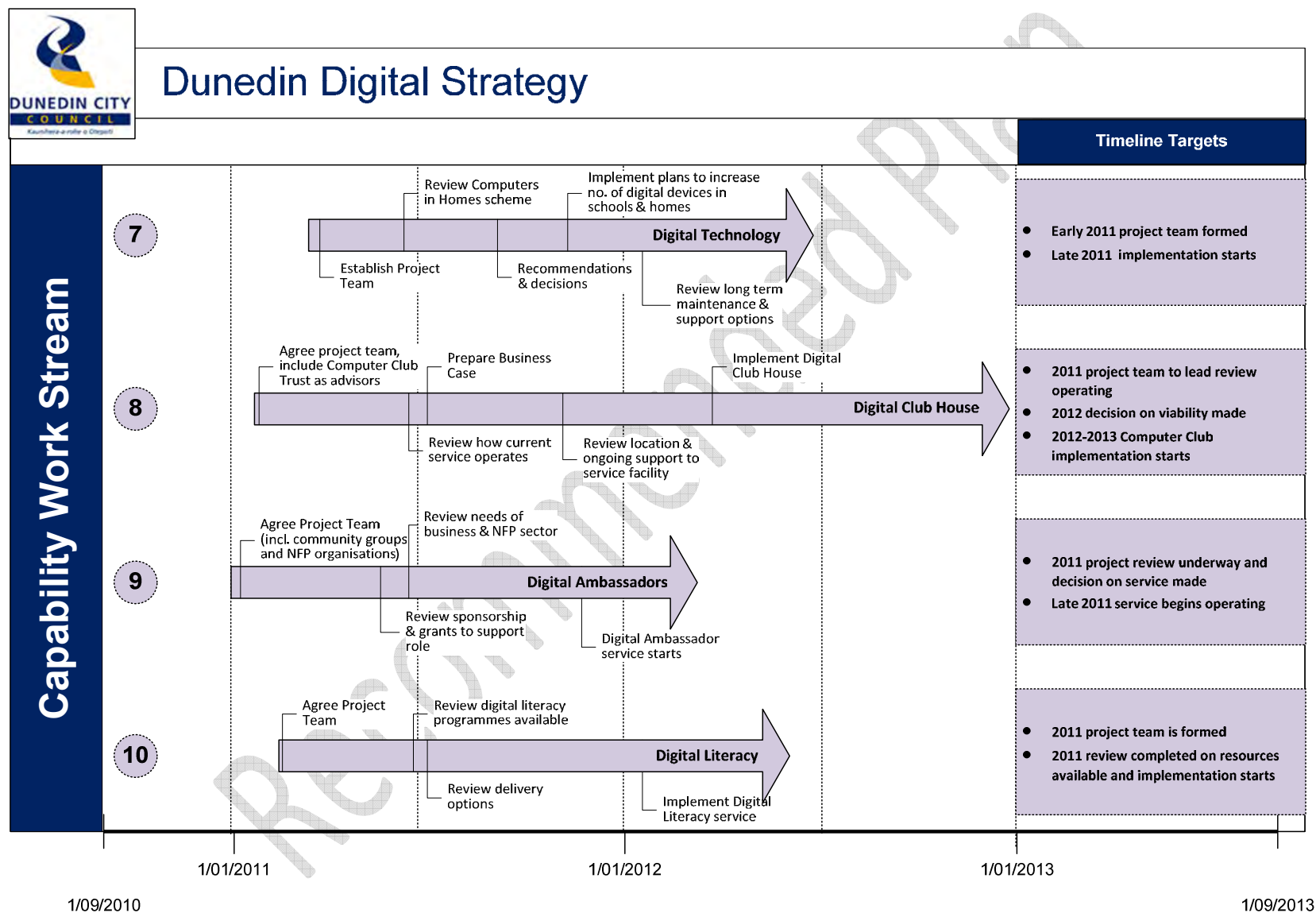
4.1 Enabling



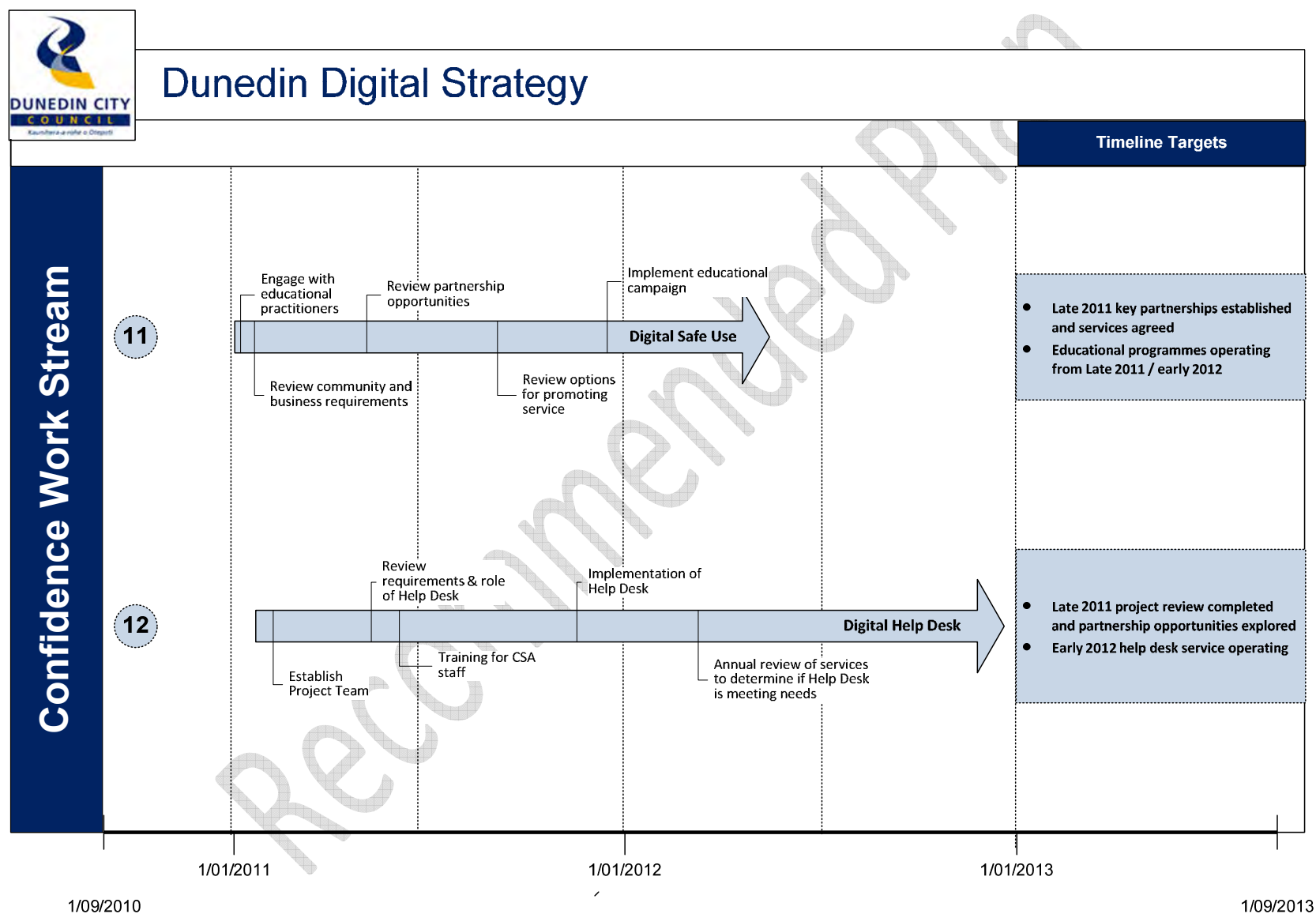
4.2 Leadership



4.3 Capability



4.4 Confidence



A Digitally Connected City to increase the access, affordability and the quality of digital networks connecting the residents and businesses across the city.

Strategic Goal

Lead discussions with government and commercial agencies to advance digital networks across the city and address the poor access reported during the consultation.

Lead a project to review the options available to connect the more rural parts of the city to fast, high quality digital networks and improve the digital service to these communities and businesses.

Lobby for improving international Internet access to the country to ensure the city is serviced well in the future.

By 2016: 75% of city residents reporting acceptable access to digital networks at home

By 2016: Fast Broadband available to 97% of rural sector

Objectives

Digital Networks Advisory Group

1

Identifying the digital infrastructure standards necessary for the city and working with the service activities at the Council to install network infrastructure as part of the continuing and scheduled programme of work.

Council to prepare a 'digital infrastructure map' of the city to show where the digital infrastructure (like fibre ducting) has been installed.

Including networking infrastructure in the code of subdivision and district plans to prepare 'green field' sites and support faster implementation of digital networks

Early 2011: Council digital networking standards defined and included within programme of work

By 2011: 75% of green field sites prepared for digital networks

Objectives

Digital Roadblocks

2

Project to implement a wireless service (wifi) across the central city and rural communities to improve the accessibility to digital networks.

Project will consider the opportunity for partnerships with current wireless providers to achieve a wide as possible coverage across the city. Project will also review the most suitable technology to use to provide a high quality and consistent service to the community and visitors to the city.

Project to assess how a "free service" can be provided. This may identify that free services are provided for a period of time or within a restricted data download limit.

By 2012: 100% of central Dunedin city and 6 rural suburbs to have access to wireless services

Objectives

Dunedin Wireless Network

3

A Digitally Enabled City which will deliver more digital content to the community, visitors and businesses across the city and develop Dunedin as a centre of digital innovation.

Strategic Goal

Lead the development and growth of digital innovation across the city. Through consultation agree on initiatives to retain and attract new digital businesses.

This may include: working with our sister city on digital innovation opportunities; providing services (like mentoring) to assist new digital businesses; supporting the Council's Economic Development Unit (EDU) projects; providing access to technology (like free Internet access or data centre hosting) to kick start new digital businesses.

By 2013: Currently 34% of those surveyed believe Dunedin is a centre for digital innovation. Target is to increase this to 65%

By 2014: Increase technology GDP by 20%

Objectives

Digital Innovation Advisory Group

4

Increase the Council's services available online to the community with a focus on online payments, social networking services and online forms.

Increased transparency of Council information and reviewing how eDemocracy can be used to build stronger relationships between the community and Council.

By 2012: Increase online services provided by the Council by 50%

Objectives

Dunedin Online

5

Project to establish a 'Dunedin City Portal' to integrate information across separate online websites within a single digital entity.

The aims of the portal are: integrate information across separate online websites within a single entity. This includes information for students, businesses, visitors and the community; support the brand 'Dunedin' by creating a one-stop-shop for city information; improve the promotion of the city and increase visibility of city events and community services; showcase digital innovation across the city through a dynamic and stimulating digital service whilst also informing the community on what digital services are available.

This project is linked to Project 3 as it is recommended that the Dunedin City Portal is the first website available when using the wireless network.

By 2011: Portal operating and integrated with the Dunedin wireless network

Objectives

Dunedin City Portal

6

A Digitally Enabled City

Strategic Projects

Strategy on a Page Dunedin Digital Strategy

Prepared by: Stuart Dillon-Roberts,
Effectus



A Digitally Connected City

A Digitally Capable City



Digital Dunedin Imagine Our City

A Digitally Capable City to raise the level of knowledge, literacy and skills to use digital technology across the community, business and service sectors.

Strategic Goal

Increase the number of digital devices available across the community and at schools. Initiatives include: establishing a 'Computer In Homes' initiative, creating an active partnership with commercial vendors to sponsor technology within a school or community group and seek grants to purchase, upgrade or maintain digital technology.

Increase awareness on open source software and benefits to the community as an alternative to reduce technology costs; support the development of a Dunedin Open Source repository and distribution media (e.g. DVD).
Promote initiatives to encourage the recycling and re-using of digital technology across the community, schools and business sectors.

By 2011: Provide a minimum of 100 digital devices per year to those schools and families that need assistance

Objectives

Digital Technology

7

Establish a community based Computer Club House (or similar initiative) to provide access to digital technology to members of the community who have little exposure at present.

Project will review opportunities for sponsorship both locally and nationally; location of Club House or Club Houses, for example: Dunedin City Library, Community Learning Centre or at a school; review of other Club Houses operating in NZ and overseas and what makes them successful and what digital services (for example building robots or making a video recording) could be offered and what skills are available locally to assist with the project.

By 2013: Computer Club House operating

Objectives

Computer Club House

8

Project to establish a Digital Ambassadors scheme to improve digital capability across community, not-for-profit groups and small business sectors.

Project will identify who will commit to support this service across the academic, student and professional ICT bodies in the city; identify a location and operating model to be followed (potentially based on the community law principles) and review how this initiative could be linked to the Computer Club House project and other digital services discussed in this strategy.

By 2011: Digital Ambassadors role established within the city

Objectives

Digital Ambassadors

9

Project to raise the level of digital literacy across the community and encourage the digital literacy services currently operating in the city.

Agree methods to develop 'practical' examples of how digital services can help the community (create the need to participate in digital networks) and collaborate with other professional bodies on delivering digital literacy programmes for the community.
Review how this initiative could be linked to other digital services discussed in this strategy.

By 2012: Digital Literacy programme operating

Objectives

Digital Literacy

10

A Digitally Confident City to increase assurance that digital services are safe and reliable for residents to fully embrace and participate in.

Strategic Goal

Promote safe use of digital services across the city to increase participation in digital technology across the city

Project will lead a 'Digital Safe Use Campaign' to advise on the safe practices for connecting, using and participating in digital services
Input from community groups and law enforcement agencies will drive what content is to be delivered to reflect the concerns of parents, community leaders and educational professionals.

By 2012: Currently 34% of residents surveyed confidently use digital services. The target is to increase this to 60% by 2013

Objectives

Digital Safe Use Campaign

11

Increase residents' confidence in accessing and using digital networks

The goal is to support the community by providing a Digital Help Desk service that will provide: advice on best practices to be followed when using digital services; advice on community based courses to attend; guidance on how to access Council digital networks; point of contact that visitors can use to enquire about digital services in the city; advice on e-recycling and promoting Dunedin ICT businesses that can assist with digital services.

By 2012: have the Help Desk service operating for the community, visitors and businesses to use

Objectives

Digital Help Desk

12



ATTACHMENT 2

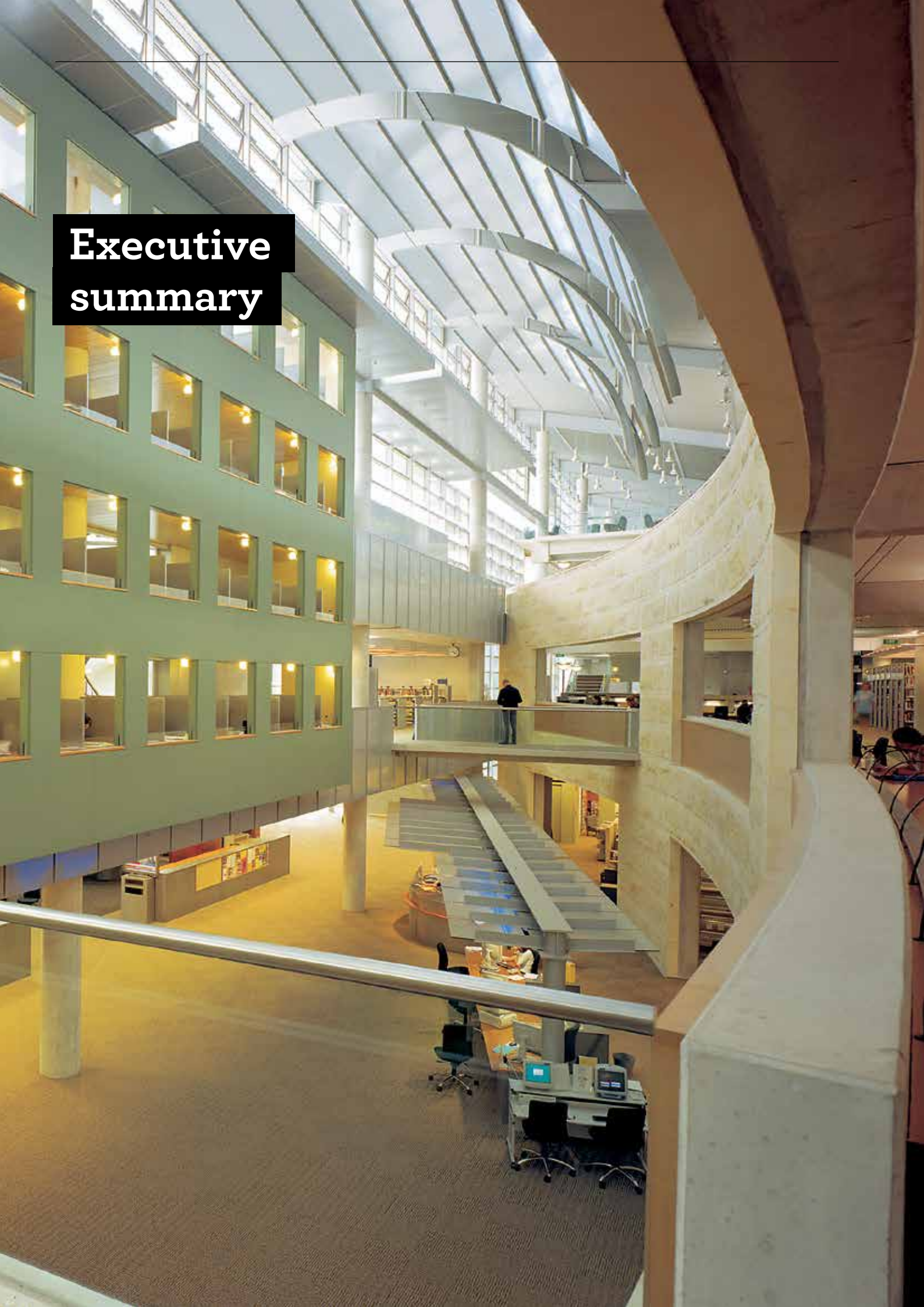
A nighttime photograph of a city street in Dunedin, New Zealand. The background features the illuminated clock tower of the Dunedin City Hall. The foreground is dominated by long-exposure light trails from vehicles, showing streaks of red, orange, and yellow light. Streetlights and building lights provide a warm, golden glow to the scene.

Dunedin's Economic Development Strategy

BY DUNEDIN FOR DUNEDIN AND BEYOND 2013-2023

dunedin
www.DunedinNZ.com

Executive summary



Background

In 2010, the Dunedin City Council pulled together a small group of key economic partners – including representatives from the Otago Chamber of Commerce, Otago Southland Employers' Association, Otago Polytechnic, University of Otago and Ngāi Tahu – to help guide Dunedin's economic future over the next 10 years.

What is the purpose of the Economic Development Strategy?

The Strategy recognises that, all things being equal, Dunedin faces the risk of losing business and people to other cities. Ultimately, the Strategy has been developed to increase skills, incomes and job opportunities for Dunedin's residents.

The Steering Group researched the city's current economic situation, reviewed strategies of similar cities, listened to locals, and talked with both national and international experts. Its members agreed on a shared vision and economic goals. Then – based on Dunedin's strengths and challenges – they identified five Strategic Themes for the city to focus on during the next 10 years.

The vision

Dunedin is one of the world's great small cities. We are renowned as a confident, competitive knowledge centre, a community where enterprise and creativity support a productive and sustainable city.

What are the Strategy's economic goals?

There are two specific economic goals:

1. 10,000 extra jobs over 10 years (requiring employment growth of approximately 2% per annum); and
2. An average of \$10,000 extra income for each person (requiring GDP per capita to rise by about 2.5% per annum).

Strategic themes

The Strategy is built around five themes:

1. Business vitality
2. Alliances for innovation
3. A hub of skills and talent
4. Linkages beyond our borders
5. A compelling destination

Initial Actions

Within each Strategic Theme, specific Actions have been identified. While there are a total of 13 Actions, eight are flagged for immediate attention. These are:

1. Better support for exporting
2. Dunedin Ambassadors' programme
3. Export education uplift
4. Grow innovative and internationally competitive industries and clusters
5. Marketing Dunedin
6. Project Shanghai and China
7. Red carpet, not red tape
8. Energy Strategy

What happens next?

For each of the five Strategic Themes, project teams will be formed to develop plans to achieve each theme's set of Actions. An overall implementation plan will be released to the public. An augmented Steering Group will continue to oversee the Strategy and report progress to the Council and the public.

This Strategy should inspire confidence in Dunedin's economic future and galvanise efforts to see Dunedin become one of the world's truly great small cities.

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Tēnei te rūrū, te kōukou mai nei,
 Kīhai mahitihiti, Kīhai marangaranga,
 Te ūpoko nui, o te rūrū,
 Terekou,
 He pō
 He pō
 He ao
 He ao
 He awatea, e-e.
 This is the owl that cries out
 His head does not move from side to side
 It does not stir either up and down
 Ever vigilant the owl cries
 Terekou!
 Tis night
 Tis night
 Tis day
 Tis day
 Ah, tis daylight.

(This whakaaraara was collected at Ōtākou by Sir George Grey in the 1850s.)

Tēnā koutou katoa,
 He mihi tēnei i kā huamokopuna o tēnei whenua, kā uri o
 Tahupōtiki, o Hotu Māmoe, o Waitaha hoki.
 Ka rere atu kā mihi i kā hapū o Kāi Te Ruahikihiki me Kāti
 Huirapa, mai i kā mauka tapu o Pukekura, a Hikaroroa
 hoki ki a koutou e noho karapotia nei i tō tātou awa o
 Ōtākou tae atu ki kā kete kai o Waikouaiti. Kai te mihi, kai
 te mihi.
 Karaka atu, Karaka atu, Karaka atu ki kā karakataka maha
 e noho ana i te rohe nei, e whai ana i kā kaupapa maha o
 tēnei taone, hai aha? Hai oraka mō tātou katoa.
 Tēnā tātou katoa.

Greetings to all,
 This is an acknowledgement from the grandchildren of
 this land, the descendents of Tahupōtiki, Hotu Māmoe
 and Waitaha.
 The acknowledgement is extended from the sub tribes of
 Te Ruahikihiki and Huirapa, from the sacred mountains
 of Pukekura and Hikaroroa to all who live around our
 waterway, Ōtākou and Puketeraki. Salutations.
 We call to the many people who live in this area, who
 pursue the many different opportunities that this town
 offers, what for? For the wellbeing of all.
 Greetings.

Introduction

While Dunedin provides its residents with a great lifestyle, the city is at risk of losing business and people to other centres. Creating an attractive environment – where businesses thrive and residents feel proud – will establish Dunedin as one of the world's great small cities.

Dunedin has an historic, cultural and physical identity that provides an enviable lifestyle. Specifically:

- The largest concentration of heritage buildings in New Zealand, as well as architectural hotspots around the Octagon, lower Stuart Street, the Exchange/Queen's Garden precinct and the campus of the University of Otago
- Outstanding natural beauty and wildlife, including the Otago Peninsula
- Quality healthcare
- First-class leisure facilities and infrastructure, such as the Forsyth Barr Stadium, Edgar Centre and Dunedin Ice Stadium
- A creative, educated, multi-cultural and innovative community that comes from being a true university city
- A vibrant city with a range of cultural, arts and recreational activities and facilities
- A compact, safe metropolitan area surrounded by a productive hinterland¹

We also have important economic foundations on which to build a prosperous city of opportunity. These include:

- The University of Otago and Otago Polytechnic, and a reputation for high quality education, innovation and research
- Access to significant natural resources, such as mineral wealth in the hinterland and extensive agriculture
- Developing strengths in high value niches of the economy related to health technologies and biotechnology, food processing, ICT, creativity, niche manufacturing and engineering
- Being the gateway to the lower South Island – a major transport and export hub

While we can be proud of our history, identity and assets, economic growth has been modest over recent decades. We are at risk of losing business, skills and investment to other faster-growing cities in New Zealand and the Asia-Pacific region. The world is experiencing an unprecedented rate of change, and our businesses and residents need to be able to respond quickly and plan ahead. Our competitors will not wait for us to catch up.

We need to build on our existing foundations and utilise our strengths and capabilities to ensure sustainable economic

and community development. We also need to provide diverse economic opportunities for our businesses and residents, while also ensuring environmental sustainability.

This Economic Development Strategy sets out the shared vision for increasing Dunedin's prosperity and a pathway for achieving that vision.

While there have been previous economic development strategies for Dunedin, this is the first time leading stakeholder organisations have come together and committed to a shared vision and responsibilities. We have listened to a broad range of important contributors – from community and industry leaders to overseas alumni, incoming migrants and Dunedin's young professionals.

Now it is time for us to take a bold step in advancing the city, by creating an attractive environment which enables business development and makes Dunedin's residents feel proud to live here. It is also time to share our capabilities and success stories with the rest of the world.

We will not get there alone. Dunedin needs a healthy region, island and nation, and they will in turn benefit from a prosperous Dunedin. We must work together with our neighbours and allies for mutual benefit.

We, the undersigned, are committed to ensuring the on-going development of Dunedin, by achieving the vision and goals outlined in this Strategy. We invite you to join us on this journey.

Dave Cull
Mayor
Dunedin City
Council

Kathy Grant
Chair
Otago Polytechnic

John Ward
Chancellor
University of Otago

Phil Broughton
Chair
Otago Southland
Employers'
Association

Pete McIntyre
Chair
Otago Chamber of
Commerce

Donna Matahaere
Chair
Te Rūnanga o
Ōtākou

Matapura Ellison
Chair
Kāti Huirapa
Rūnaka ki
Puketeraki



¹ In 2011, primary production (agriculture, agricultural services, forestry and logging, and mining and services to mining) contributed just over \$136 million to the Dunedin economy (BERL, *Economic Profile and Performance 2011: Otago Region*, 2012). Full details of references cited in the footnotes are provided in the reference section at the back of the Strategy.

The role of the Economic Development Strategy

At the highest level, the Economic Development Strategy is designed to unite stakeholders and provide a single, shared vision for Dunedin. This vision – Dunedin is one of the world’s great small cities – is ultimately about increasing incomes and job opportunities for those who live here.

This Economic Development Strategy plans to grow incomes and job opportunities by leveraging the resources available to enhance Dunedin’s business, industry and economic growth performance.

The Strategy:

- Articulates a bold economic vision and goals for Dunedin’s economy
- Identifies the challenges and opportunities we face in achieving that vision
- Identifies Dunedin’s economic value proposition and the most likely drivers of growth
- Proposes several ‘Actions’ that will positively affect those growth drivers and create opportunities for all

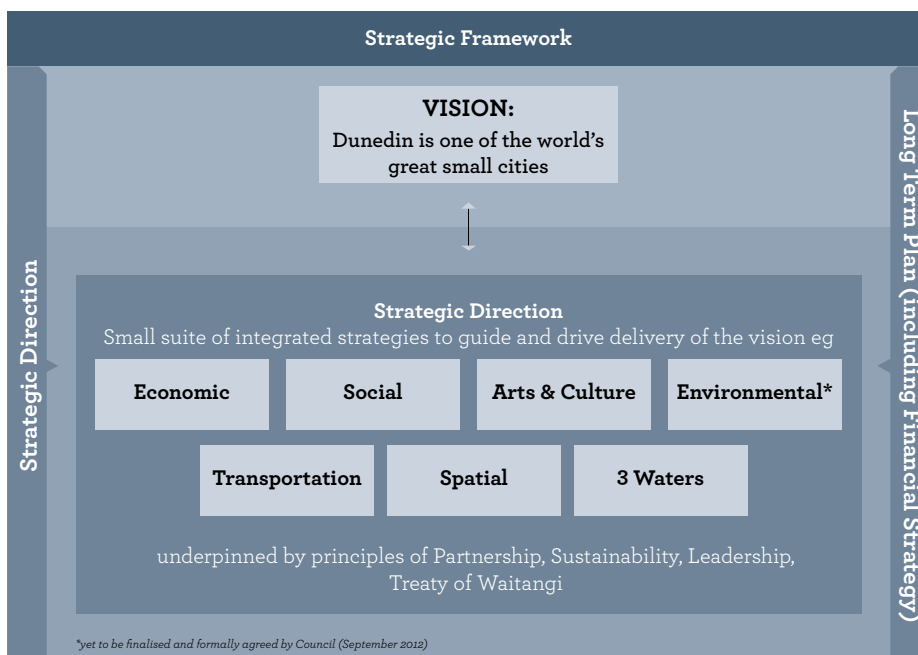
An example of how the Economic Development Strategy relates to other strategies

For the Dunedin City Council (DCC), this is one of a set of strategies that underpin its Long Term Community Plan. The table below shows how the Economic Development Strategy fits within the broader DCC planning framework. The Strategy incorporates the implementation of the Dunedin Visitor Strategy, which is focused on growing our visitor industry. It has been informed by the Spatial Plan to ensure that its economic aspirations are consistent with the long-term aspirations for the city. It sits alongside and will align with our cultural, environmental, digital, transport and social wellbeing strategies.

This alignment recognises that our economic development efforts must positively affect our quality of life and the environment while, at the same time, leveraging these features of Dunedin for economic advantage. The other strategies will set priorities for different aspects of our city and region, and will also affect our economic development.



Planning framework for the Council



Dunedin Digital Strategy (2010 – 2013)

The Strategy has a vision to create ‘Digital Dunedin’ and, through the development and leadership of digital initiatives, to increase access to digital networks and use of digital technology across the city. The Strategy aims to increase the delivery of digital content and raise the level of digital capability across the community, business and service sectors.

The actions in the Dunedin Digital Strategy and Dunedin Economic Development Strategy are mutually supportive. For example, the delivery of a high performing and quality digital network across the city, improving the accessibility and affordability of digital services, and improving digital literacy will improve labour and business productivity. In particular, the Digital Ambassadors’ project seeks to improve small business use of, and skills related to, digital technology and digital services. Dunedin has a dedicated Digital Office that is focused on the implementation of the Digital Strategy and the leadership of the digital projects and initiatives within the Strategy.

Social Wellbeing Strategy

The Social Wellbeing Strategy aims for Dunedin to be a city with connected people, cohesive communities and quality lifestyles. There are five strategic directions:

- Connected people
- Vibrant and cohesive communities
- Healthy and safe people
- A reasonable standard of living for all
- Affordable and healthy homes

The Social Wellbeing Strategy includes a focus on a range of employment opportunities for all, as well as the provision of warm, healthy and affordable housing. The indicators to be monitored as part of the strategy include total employment, population with low incomes and number of homes insulated under schemes.

Arts and Culture Strategy

The arts and culture sector plays an important part in Dunedin’s economy. It contributes to the development of the economy in its own right through its practitioners, businesses and employees, but the sector also reinforces other sectors (for example tourism, engineering and ICT). Significantly, it provides a point of difference, vibrancy and place and identity-shaping elements to the city. The Arts and Culture Strategy is in development.

Partnership

Key economic partners within Dunedin have come together and committed to this Strategy. We have pooled resources and effort, and accepted responsibility for leading, supporting and delivering actions that will accelerate Dunedin’s economic prosperity.

Each Strategy partner also has its own strategy with organisation-specific visions and goals. However, Strategy partners have agreed to weave this Strategy’s vision, goals and actions with their own.

While this partnership will help ensure Dunedin reaches its economic potential, others play a vital role. We will continue working directly with industries, investors, individual businesses and residents to make this happen.

Dunedin City Council

The Dunedin City Council can help encourage local economic prosperity through:

- Helping create a city that is attractive to visit and live in
- Investing in new and existing infrastructure
- Balancing the need for regulation with a business-friendly ethos
- Its procurement policies
- Supporting business development initiatives
- Helping promote the city to current and potential investors, skilled staff and others with access to resources
- Working to ensure the city’s economy is resilient to future change

Otago Chamber of Commerce

The Otago Chamber has been bringing Otago business leaders together for more than 150 years. Its purpose is to lobby and advocate on behalf of Otago’s business community.

Through the support of its members and their contributions, it promotes opportunities for both business and economic development.

It will use its international, national and local reputation as an organisation with proven results to support and promote the vision, goals and various projects identified in this Strategy.

Otago Southland Employers' Association (OSEA)

Through an extensive Dunedin city and adjacent dual province membership base, OSEA will apply a wide range of commercial and business support mechanisms to assist in securing local economic development objectives. Delivery of employment law, health and safety and business training offerings serve to maintain and enhance recognised professional outputs as demanded by local operators.

As a founding stakeholder in BusinessNZ, it works diligently to activate effective lobbying of central Government as and when city needs arise. This capability is also applied through its representation in ManufacturingNZ and ExportNZ activities. OSEA will continue to work effectively with many local organisations in partnership capacities.

Otago Polytechnic

The Otago Polytechnic makes a significant direct contribution to the Dunedin economy through its teaching and applied research activities. The Polytechnic is committed to deploying its resources in the interests of industry, business and community. Its particular contribution to the economic development of the city and the wider Otago region is the provision of 'work-ready' graduates and technology and knowledge transfer services. The Polytechnic will align its own development initiatives with those identified in this Strategy.

University of Otago

The University of Otago is the city's largest employer and home to more than 20,000 students – of whom about 80% come from outside Dunedin. The University makes a substantial contribution to the Dunedin economy through its teaching, research and commercial activities and the provision of infrastructure to enable these.

It will continue to deploy its expertise and network of contacts to support Dunedin's economic development more generally. That contribution will be underpinned by a partnership approach to economic development, particularly with Crown Research Institutes that have a presence in the city, Dunedin City Council and other Strategy partnership members.

Ngāi Tahu

The Takatā Whenua (people of the land) of the Dunedin area originate from the Waitaha, Kati Māmoe and Kāi Tahu tribes who, over time, through conquest, marriage and peace alliances, largely merged and are generally referred to now as Ngāi Tahu (Kāi Tahu in the southern dialect). The wider Dunedin region was the site of many settlements, and today the traditional settlement areas for Kāi Tahu are located at Ōtākou (Otago Peninsula) and Puketeraki (Karitane), within close proximity of the traditional pa of former times, Pukekura (Taiaaroa Head) and Huriawa (Karitane). Our tupuna (ancestors) signed the Treaty of Waitangi at Pukekura (Taiaaroa Head), at the entrance of the Otago Harbour.

Kāi Tahu welcomes the opportunity to work alongside the Dunedin City Council to build a prosperous future for our city. Te Rūnanga o Ngāi Tahu is a significant contributor to the Te Waipounamu (South Island) economy and looks forward to forging effective relationships to continue

to grow a tribal asset base that supports the aspirations of whānau. Ōtākou and Puketeraki, as manawhenua, will take central roles in articulating and leading the engagement of Kāi Tahu in this Strategy.

The business community

Ultimately, it is Dunedin's business community that will ensure that this Strategy is successful. It is businesses that innovate, export, grow, create jobs and generate higher incomes for residents. All of the Strategy's Actions aim to make Dunedin a better place to do business. We need businesses to partner with the Strategy – to ensure the Actions make a real difference.

Neighbouring districts, regions and central Government agencies

We must inspire confidence amongst our neighbours and central Government that we are committed to the Strategy, will add value, and will involve them in delivery of the Actions. Collaboration with other parts of Otago and the South Island is essential, as is working alongside organisations like the Ministry of Business, Innovation and Employment, New Zealand Trade and Enterprise, the Advanced Technology Institute and the Otago Regional Council.

The 10-year vision and goals

VISION

- Dunedin is one of the world's great small cities. We are renowned as a confident, competitive knowledge centre, a community where enterprise and creativity support a productive and sustainable city.

ECONOMIC GOALS

- Dunedin provides sustaining and appealing jobs, business and lifestyle opportunities for all. Specifically: 10,000 extra jobs over 10 years (requiring employment growth of approximately 2 percent per annum); and an average \$10,000 of extra income for each person (requiring GDP per capita to rise by about 2.5% per annum).

BENCHMARKS

- Dunedin residents rate their quality of life the highest in New Zealand.
- Dunedin has the highest proportion of the adult population with educational qualifications, when benchmarked against comparator cities.
- Dunedin has the highest proportion of workers employed in knowledge intensive industries, when benchmarked against comparator cities.
- Dunedin's export growth exceeds the national average over 10 years.
- Dunedin's proportion of high growth businesses exceeds the national average.
- Enterprise start-up rates exceed those of comparator cities.

Our vision encapsulates several ideas:

- Dunedin is a centre of learning, education and research
- It sparks creativity and experimentation in our community
- It has an enterprising and pioneering spirit
- The city has an inspiring cultural, heritage and natural environment
- Dunedin is relevant and connected to international markets

If Dunedin achieves its vision in the next decade, we will share company with benchmark small creative/knowledge cities, such as the City of Salisbury (Adelaide), Kingston (Canada), Dundee (Scotland), Oulu (Finland), Uppsala (Sweden), Tübingen (Germany), Cambridge and Durham (England), and Leuven (Belgium). We intend to match them with regard to quality of life, education, knowledge intensity, export growth and enterprise.

To achieve the vision, we have identified key goals and benchmarks² that will have the most significant effect on our economic performance and which are also measurable and tangible.

These goals and benchmarks are focused on economic growth. Other strategies include goals and priorities related to inequality, the environment, and quality of housing.

The key goals are challenging, but achievable. For example, the employment goal of 2% per annum growth over the next ten years compares to realised employment growth in Dunedin of 1.1% over the last decade. The analysis and testing of the goals is attached at Appendix 1.

While we have met some of these targets in the past, we are operating in a new and changed world. If we do not change our performance and find new ways of doing business, Dunedin is predicted to have limited growth over the coming decades.³ Success will require big impact projects and a commitment to:

- Providing an environment that enables and encourages businesses and other organisations to flourish, grow, export and adapt
- Using partnerships to build scale in existing industry and research strengths
- Responding collaboratively to resource scarcity and consumer pressures for low carbon, ethical products and processes

- Further aligning the skills being generated through our education and training system with industry opportunities
- Developing our personal, business and city relationships with regional and Asia-Pacific trading and investment partners
- Continuing to invest in our cultural, leisure and natural assets

² Note that, in the benchmarks, knowledge intensive industries include medium and high tech manufacturing and knowledge intensive services. The segments of industries which are considered to be knowledge intensive have been determined by the OECD and European Union according to technological intensity (R&D expenditure/value added) and knowledge intensity of services (based on shares of tertiary educated people), using a statistical classification of economic activities. See Grimes et al. *Auckland's Knowledge Economy: Australasian and European Comparisons* for a discussion of how this has been applied in the New Zealand context.

³ For example, Dunedin City's population is predicted to increase at around 0.4% per cent per annum up to 2031. *Statistics New Zealand, Subnational Population Projections: 2006(base)-2031 (October 2012 update)*.

Two scenarios for Dunedin

The Strategy's vision is clear: Dunedin will become one of the world's great small cities within 10 years. However, it is also clear what the future holds if there is a lack of commitment to the Strategy: Dunedin will be a small, peripheral city – invisible on the world stage and in slow decline.

1.

If we commit to this Strategy:

Dunedin will be one of the world's great small cities – an internationally competitive, growing knowledge centre

For businesses:

- Clusters of ICT and creative, health technologies and biotechnology, primary and food processing, niche manufacturing and engineering, and education businesses are established and growing, located in attractive and visible locations
- Exporting is actively pursued and celebrated
- Entrepreneurs, researchers, expats, migrants, students and visitors are drawn to Dunedin
- Skilled staff are readily available to meet growth demands
- Investment flows into local businesses
- Businesses are aware of, and take advantage of, global trends, and leverage inter- and intra-regional opportunities

For the community:

- A greater number of high paying jobs are available
- Unemployment declines
- Residents are proud of national and international achievements in business, cultural and leisure activities
- Everyone shares in economic success
- There is a vibrancy in the central city
- Residents enjoy a high quality of life

For local and central government:

- The rating and tax base increases
- Improving infrastructure and maintaining cultural amenities is affordable
- A positive cycle of growth becomes embedded

2.

If we do not commit to this Strategy:

Dunedin will be a small, peripheral city – invisible on the world stage and in slow decline

For businesses:

- High tech businesses leave Dunedin for other cities. Dunedin loses its innovators and sectors become less innovative and export driven
- Demand for service businesses declines and they too close their doors
- Students, migrants and visitors use Dunedin as a stepping stone to other more exciting destinations
- Dunedin finds it difficult to attract capital for businesses or projects

For the community:

- Unemployment increases
- Lower relative incomes for residents, with people leaving for better opportunities in other cities
- Increasing disparity between the wealthy and the majority of the community
- The central city becomes run down
- Residents' quality of life declines over time

For local and central government:

- The rating and tax base declines
- Dunedin cannot afford to maintain its heritage buildings, cultural or sporting amenities
- A cycle of decline becomes entrenched

Dunedin's economic performance



Dunedin's economic performance has improved over the past 10 years, but it lags behind the national average and growth rates are not sufficient to see the city catch up in the near future. For Dunedin to remain attractive, there need to be compelling reasons for people to move to and remain in the city, our businesses must be productive and incomes must rise.

In 2011, Dunedin generated about \$4.8 billion of gross domestic product (GDP) and employed about 52,000 full time equivalent (FTE) employees. This represents a significant increase from 10 years earlier, when Dunedin generated almost \$4 billion in GDP and created jobs for about 47,000 FTEs.

During the five years from 2005 to 2010, Dunedin's unemployment rate tracked below the nationwide level – compared to the previous five years, when Dunedin consistently registered a higher unemployment rate than the national average.

Despite these positive results, employment and GDP growth in Dunedin have generally been below average. This can be partly explained by Dunedin's slow rate of population growth, which was about half the national average between 2000 and 2010, and well below other cities in New Zealand. While the rate of population growth in Dunedin is expected to increase, it is at a rate well behind the national average.

Dunedin also performs relatively poorly on most measures of income. For example, Dunedin's GDP per capita was estimated at \$39,128 in 2011, compared to \$45,808 across New Zealand. The 2006 Census also showed that both median household

and personal incomes lagged significantly behind the national average (\$43,400 per annum, compared to \$51,400 nationwide in the case of household income). However, on both measures, Dunedin's growth rate is slightly above the national average.

Many of these differences can be explained by the size of Dunedin's student population. However, statistics suggest that average labour productivity across most sectors (GDP per FTE) is lower in Dunedin (although growing faster than New Zealand's average rate).

While this may be partly attributable to differences in the number of hours worked, it does pose some challenges, given that an aging population is expected to reduce the size of Dunedin's workforce between 2011 and 2031.

Overall, Dunedin's economic performance has improved over the past 10 years. However, Dunedin's performance is not improving at a fast enough rate to better the national average in the foreseeable future. Turning this around will require growth in population and labour utilisation, as well as productivity improvements across the city's economy.

	Dunedin	New Zealand	Average growth rate in Dunedin (per annum)*	Average growth rate in New Zealand (per annum)*	Performance relative to NZ ↑ Improving at faster rate = About the same rate ↓ Deteriorating
GDP (2011 \$million)	\$4,785	\$194,277	1.8%	2.3%	↓
GDP per capita (2011)	\$39,128	\$45,808	1.1%	1.0%	=
Median household income (2006)	\$43,400	\$51,400	5.9%	5.4%	↑
Population (2011)	122,298	4,241,126	0.7%	1.3%	↓
Employment (FTEs)	52,264	1,860,767	1.1%	1.9%	↓
Productivity (GDP per FTE, 2011\$)	\$91,559	\$104,407	0.7%	0.4%	↑

* All growth rates are calculated over the period 2001-2011, except median household income (which is for the period 2001-2006). Source: BERL regional data

The economic role of small cities and drivers of growth

Small cities are, obviously, very different to large cities. Dunedin can learn from similar small cities’ successes and priorities, focusing on our own points of difference and advantages.

Small cities offer	Big cities offer
Strong communities	International business and transport connections
Compactness and accessibility	Large range of cultural and retail activities
Lower cost of living	More/specialised businesses, educational institutions, labour and investment
BUT	BUT
Have lower average wages	Are more expensive to live in
Are vulnerable to economic shocks	Have higher levels of congestion and pollution
Are more dependent on surrounding regions and other cities	Have extremes of wealth and poverty

Cities play a growing and critical role in contributing to a nation’s economic prosperity, because they are the preferred location for skilled people, creative and high technology businesses, tertiary and research institutions, and financiers and capital providers. People and businesses move to – and stay in – cities because they provide a variety of opportunities in one location, whether these are jobs, cultural, recreational or leisure activities.

Small- and medium-sized cities, like Dunedin, play a different role than large metropolitan cities, like Auckland. They have different advantages and disadvantages. We cannot, and should not try to, make Dunedin a large metropolitan city. Rather, we need to focus on Dunedin’s points of difference and making the most of the advantages that our smaller city offers. This means understanding our history and where we have come from, where we are now, and our strengths and weaknesses. We need to build on what we have, rather than try to replicate initiatives of metropolitan cities.

We can learn from the successes of international small knowledge cities. Studying other small cities with similar characteristics to Dunedin and which punch above their weight, we find recurring themes:

- Strong connections between tertiary specialties and the local economy
- A focus on high-value science, technology and research and development driven industries
- Strong networks within and between industry, research and academia for innovation
- A well-utilised, highly-qualified workforce, which continually attracts and retains new talent
- A high-quality natural and built environment

COMPARATOR SMALL KNOWLEDGE CITIES⁴



Cambridge, England

- Population 126,000 (estimated 30,000 students)
- Estimated €22,000 GDP per capita ~ NZ\$44,000 GDP per capita⁵
- University town (University of Cambridge as well as Anglia Ruskin University, Hills Road Sixth Form College, Long Road Sixth Form College and Cambridge Regional College)
- Scientific research and development capital of the UK
- Five times more research and development jobs than the UK average
- Specialties in biotechnology and software development
- High population growth (8.4% annual growth in population over 2001-2009)⁶
- One of the UK's 11 cycling cities



City of Salisbury, North Adelaide, Australia

- Population 130,000
- Estimated A\$99,000 GDP per capita (2006) and economy grew at a rate of 4.9% per annum over 1991-2006.⁷
- University of South Australia Mawson Lakes Campus specialises in computing and information technology, engineering, science, civil aviation, applied science, sports science, e-commerce and environmental studies. University campus has collaborative links with the nearby Technology Park
- Recognised national leader in defence, electronics and technology industries and environmental endeavours
- Home to BAE Systems, Motorola Australia, Mayne Pharma, Tenix Defence, Michell Australia, SAAB Systems and Air International



Kingston, Ontario, Canada

- Population of 125,000 (metropolitan area 160,000)
- Estimated CA\$33,775 GDP per capita ~ NZ\$43,900 GDP per capita⁸
- Home to Queen's University (17,000 students), Royal Military College of Canada, St Lawrence College
- Focus sectors: green technologies, advanced manufacturing, food processing and agri-business, research and development, logistics and warehousing, health care, tourism
- Most PhD-holders per capita of any city in Canada
- Recognised nationally for high quality of living and amenities



Oulu, Finland

- Population of 144,000
- Home to University of Oulu and the Oulu University of Applied Sciences (formerly Oulu Polytechnic)
- Northern Ostrobothnia Hospital District is a significant employer
- Once known for wood tar and salmon, Oulu has evolved into a major high-tech centre, particularly in ICT and health technology. More than 200 global companies operate in Oulu
- 5th in R&D spending per capita in Europe
- Ranks number one on growth competitive index in Finland
- Has five Technopolis science and technology parks/centres catering for mobile technologies, health and wellbeing technology and ICT services, and clean technology

⁴ Hofer et al. *From Strategy to Practice in University Entrepreneurship Support: Strengthening Entrepreneurship and Local Economic Development in Eastern Germany: Youth, Entrepreneurship and Innovation*; City of Salisbury, City of Playford, and City of Tea Tree Gully, 'Invest Northern Adelaide - Northern Adelaide is Leading as the "Can Do Place" for Business'; City of Salisbury, *Salisbury. It Makes Good Business Sense*; Greater Cambridgeshire Partnership. *Greater Cambridge Sub-Regional Economic Strategy 2009-2012*; Kingston Economic Development Corporation, 'Kedco'; KEDCO, *Strategic Plan 2010-2015*; City of Oulu, Oulu, Finland: n.d. <http://oulu.ouka.fi/english/index.asp>; <http://www.businessoulu.com/en/home.html>; Technopolis 'Home of High Tech' Technopolis, n.d., <http://www.technopolis.fi/en/technopolis/space/oulu/Pages/default.aspx>

⁵ European Commission, *City Statistics Urban Audit (2007 - 2009)*. Euros converted to New Zealand dollars using historic exchange rates

⁶ Cambridge City Council, *Cambridge City Annual demographic and socio-economic report 2011*.

⁷ City of Salisbury, *Salisbury Economic Development Strategy - Salisbury, Shaping the Future 2008*.

⁸ Kingston Economic Development Corporation. 'Community Profile', *Kingston Canada*. Canadian dollars converted to New Zealand dollars using historic exchange rates.

What factors will drive Dunedin's economic performance?

Dunedin's economic performance and potential is based on:

- People
- Infrastructure
- Capital
- Land and natural environment
- Education, research and local government institutions
- The quality and degree of complementarity between these resources

In combination, and when mutually supporting, these resources can create sources of economic advantage. These include having high quality built, natural and business environments, innovation and knowledge bases, connectivity, image and identity, amenities and industrial mix.

Dunedin's performance across each of these drivers has been assessed to identify our value proposition and the most likely drivers of growth, as well as key challenges that need to be addressed.

Built environment

Attractive and accessible properties, housing and land, which contribute to the functionality of the city and encourage people to live and work in Dunedin.

Business environment

A place where it is easy to do business, through relevant and responsive bylaws, efficient planning and resource management processes and building regulations.

Innovation and knowledge base

The capability to develop new and innovative products, services, processes and markets, underpinned by strong networks and connections between business, education and research organisations.

Connectivity

Many and quality links within the city, nationally and internationally, by digital infrastructure, road, rail, sea and air - to enable the transfer of goods, services, people, knowledge, technology and investment.

Image and identity

A high quality lifestyle and distinctive image and authentic identity, which attract and retain people and businesses.

Amenities

Attributes and services which make a city attractive and safe for living and working, including a range and quality of retail, cultural, natural and public amenities.

Industrial mix

A diverse industrial base, but with specialisations in key sectors or economic functions.

Natural environment

A protected and enhanced natural environment that continues to develop economic advantage.

Dunedin's stand-out advantages



As a city, Dunedin has four significant advantages:

- A strong knowledge base
- A growing pool of creative and high-tech enterprises and talent
- High quality amenities
- Cohesive community and whanau, and a great lifestyle.

Strong knowledge base

The University of Otago is a university of international standing. All major international rankings assess the University as one of New Zealand's top two universities, recognising the quality of its education and research.⁹ The University of Otago achieves the highest student retention and qualification completion rates in New Zealand, and it is the country's most research-intensive university.¹⁰ It is New Zealand's only provider of dentistry and surveying degrees, and one of only two providers in several other fields, including medicine.

The Otago Polytechnic is one of New Zealand's top performing polytechnics, with high course and qualification completion rates and the New Zealand Qualification Authority's highest quality rating.¹¹ Its core strengths are in health services, design, IT and engineering. It also has specialist expertise in business improvement.

These institutions attract many students and academics to Dunedin, (including substantial numbers from overseas) and have expertise that supports research and development in several of our industries. They also punch above their weight with regard to external research.

Dunedin is also home to a number of Crown Research Institutes.

- AgResearch in Invermay, which specialises in animal molecular biology (particularly genomics), deer, sheep, land management, biocontrol and biosecurity
- Plant and Food Research is part of the Plant Extracts research unit at the University of Otago
- The National Institute of Water and Atmospheric research team in Dunedin focuses on water resources and atmospheric processes
- The Institute of Geological and Nuclear Sciences team investigates natural hazards and geological resources
- Landcare Research specialises in catchment ecosystem services, geometric mapping and terrestrial vertebrate pest control research

Dunedin has a well-educated population, with the highest concentration of postgraduate qualifications of any New Zealand city.

Growing pool of creative and high-tech enterprises and talent

Dunedin has a high proportion of workers employed in knowledge-intensive occupations. Health technologies and biotechnology, niche manufacturing and engineering, ICT and creative-related industries have all grown over the past decade, representing more than \$500 million to the Dunedin economy. These industries are built on the city's history of investments and capability and it would be difficult to replicate them elsewhere (for example, the Medical School, Natural History New Zealand, Invermay Agricultural Research Campus).

Range of high quality amenities

Dunedin is unique in New Zealand in having a high standard of cultural, leisure, public and natural amenities. There is also a strong commitment to environmental sustainability and city resilience. Key amenity strengths include:

- The largest amount of green space per person for a New Zealand city and a stunning natural environment
- New Zealand's largest collection of heritage buildings in our city centre
- Numerous theatres, galleries, churches and community facilities
- Award winning architecture
- Access to quality public and private health services
- A relatively safe city with low crime rates
- An enviable range of recreation and leisure opportunities and facilities, such as parks and reserves, the Otago Peninsula, tracks and cycle ways
- World-class venues, including Moana Pool, the Forsyth Barr Stadium and the Edgar Centre
- A high standard of infrastructure

Cohesive community and whānau, and a great lifestyle

Many people choose to live in Dunedin for lifestyle reasons. It is an excellent city in which to raise a family. The 2010 Quality of Life report indicated 93% of Dunedin residents rated their overall quality of life as 'extremely good' or 'good'. There is a strong sense of place and understanding of the importance of heritage. There is a strong social glue and commitment towards local community. The style of doing business is open and relaxed and based on personal reputation and integrity. Dunedin's size makes it perfect for creating and fostering networks.

9 Times Higher Education, 'The Times Higher Education World University Rankings 2011-2012'; QS Quacquarelli Symonds Limited, 'QS World University Rankings.' *University of Otago*.

10 Tertiary Education Commission, *Performance-based Research Fund Annual Report 2009*; Tertiary Education Commission, *The Performance of Tertiary Education Organisations: University of Otago 2010*.

11 Ministry of Research, Science and Technology, *Research and Development in New Zealand*.

Dunedin's challenges

Dunedin is not without its challenges when it comes to achieving its economic goals. These challenges stem from being smaller than, and distant from, other cities and countries. However, the challenges are surmountable.

We are not on the radar of international investors, businesses and migrants.

While we have good sea freight connections, via Port Chalmers, we lack direct air connections to major markets beyond Australia. International business travellers and investors must travel through Christchurch or Auckland. We have little or no profile with major markets, although we are building good economic relationships in China.

While Dunedin must retain and enhance its lifestyle appeal, this must be supported by good job opportunities and incomes for migrants.

We need to build up our high value and tradeable sectors.

Like many other cities internationally, Dunedin's economy has shifted from manufacturing to a more service orientation.

For Dunedin, this gradual process of deindustrialisation has meant stronger employment growth in more inwardly-focused (rather than export-focused) sectors like education and health care. These sectors are reliant on central Government policy and funding and, as a result, a significant proportion of Dunedin's economy is determined by central Government policy.

The Government is signalling a desire for greater value for money from its investment and more efficient services.

The challenge is building off, and diversifying, our existing strengths to maintain and create growth in high value added and tradeable sectors.

We have pockets of deprivation and youth unemployment.

In 2006, the New Zealand Deprivation Index¹² showed that 26% of Dunedin's population lived in areas that are most deprived (deciles 8, 9 or 10 of deprivation index). The student and outside the working age populations are factors in these results. However, it is clear that there are significant economic inequalities present in Dunedin.

Compared with other cities in New Zealand, Dunedin appears to have high youth unemployment. In the June 2012 quarter, Dunedin had the highest proportion of unemployment benefits¹³ paid to recipients aged 18 – 24 (34.3%) in comparison to core cities.¹⁴

We are too often regarded as a place to visit, rather than a permanent destination.

While 80% of university students come to Dunedin from outside the region, only a small proportion of them stay following graduation. We are not creating enough job opportunities relevant to their areas of study. A relatively low proportion of Dunedin's workforce is born overseas (17%, compared to 23% across New Zealand¹⁵) and we attract only a small proportion of New Zealand's permanent migrants (2.3% in 2006).¹⁶ This compares to 18.9% for Auckland (based on old Auckland City Council boundaries), 6.1% for Wellington and 8.8% for Christchurch.

We have weak international connections.

While a significant proportion of New Zealand's exports exit through Dunedin's ports (third highest New Zealand's export tonnage, and fourth highest export value),

the vast majority is not produced or manufactured in Dunedin.

A survey of Dunedin businesses found that while 15% currently exported, 94% had no intention of exporting in the future.¹⁷ The same survey in Christchurch found that 39% exported. Only a small proportion of our economy is in internationally tradable sectors. The current (and predicted increases in) costs of travel and freight also act as a barrier to connecting beyond our borders.

We need to maintain and enhance the vibrancy of our city.

Unlike larger, more sprawling metropolitan cities, we have a definite central business district. However, there is a risk this will become increasingly jaded and poorly maintained. Many of our heritage buildings require upgrading. There are pockets of under-utilisation in and around our city centre, with vacant heritage, warehousing and character buildings. More can be done to increase public art and recreational, cultural and leisure opportunities.

Our city is more than the central business district, so all our centres must be attractive and pleasant places to live and work in. Much of this is influenced by housing performance. One of the key challenges for Dunedin is our ageing housing stock. One in five dwellings in Dunedin was built prior to 1920 and a large number of dwellings was built from 1950 to 1970. The design, condition and insulation of many of these buildings are poor.

We need to have a unified stance and a passion for doing things differently.

Business as usual will not get us to where we want to be. We need to pool our resources, work in partnership and be bold in our outlook and delivery.

¹² The New Zealand Deprivation Index is a measure of the level of socio-economic deprivation in small geographic areas of New Zealand. It is created using Census data for the following variables: Car and telephone access, Receipt of means-tested benefits, Unemployment, Household income, Solo parenting, Educational qualifications, Home ownership and Home living space.

¹³ Includes unemployment benefits and unemployment benefits (hardship). This excludes student hardship benefits.

¹⁴ Ministry of Social Development Centre for Social Research and Evaluation, *Benefit Fact Sheets*. Figures for other core cities are: Auckland (21.1%), Hamilton (32.1%), Tauranga (27.5%), Wellington (23.7%) and Christchurch (32.2%).

¹⁵ Statistics New Zealand, *2006 Census Tables About Dunedin City*.

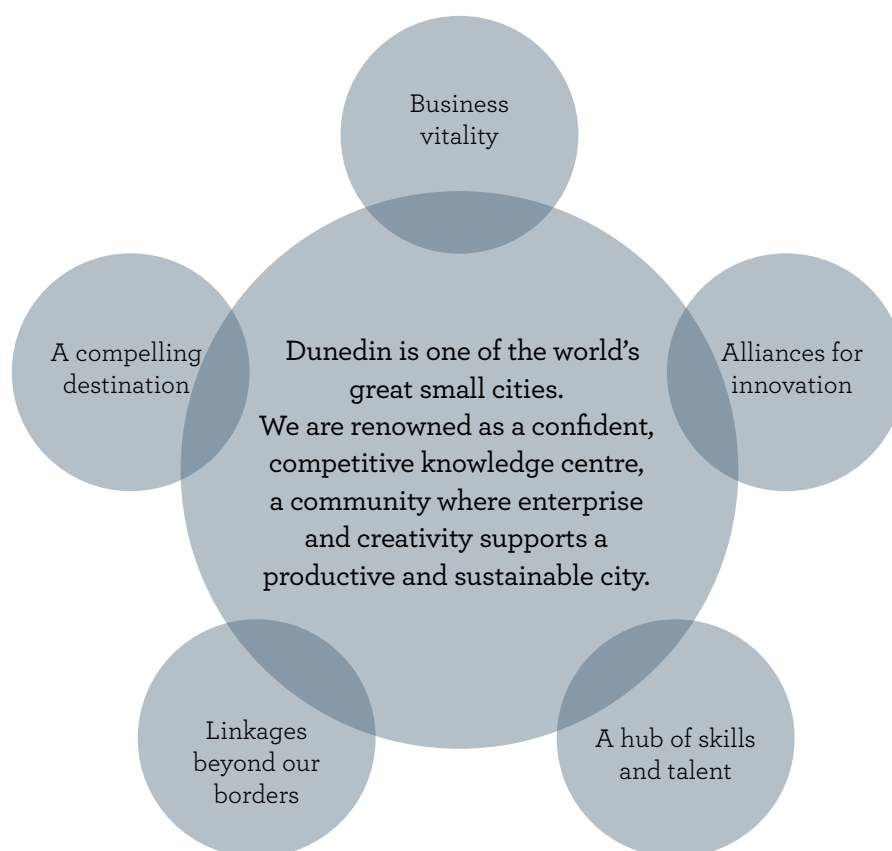
¹⁶ Statistics New Zealand, 'Culture and Identity - Statistics New Zealand'. *2006 Census Population and Dwellings Tables, Birthplace and Years Since Arrival in New Zealand*.

¹⁷ Research First, *Dunedin City Council Business Survey*.

Strategic framework

Dunedin's residents have told us they want greater economic opportunities. This requires developing, attracting and retaining more people and businesses to work, live and play in Dunedin to create a positive cycle of growth. Analysis of our challenges and strengths, and consultation with our Strategy partners have highlighted five strategic themes for the next decade:

1. Business vitality
2. Alliances for innovation
3. A hub of skills and talent
4. Linkages beyond our borders
5. A compelling destination





	Business vitality	Alliances for innovation
What does this mean?	This theme is about ensuring Dunedin is an easy place to do business and that enterprises can anticipate and adapt to resource scarcity and consumer pressures. We need land and office space available for commercial endeavours, support for entrepreneurs to establish enterprises and for our businesses to grow, DCC policies and processes that encourage business, infrastructure that supports business growth and adaptability, and businesses with the right know-how and aspirations to compete internationally.	This theme is about ensuring Dunedin uses its industrial and research strengths to its advantage. This means building scale in existing industry and research strengths through partnerships, as well as ensuring the research and science base helps build commercial opportunities. It also challenges us to combine forces to develop greener products, services, technologies, practices and markets.
What advantages does this theme build on?	• Quality business environment • Amenities • Innovation and knowledge base	• Industrial mix • Innovation and knowledge base
What is the relevance of this theme?	It will help address the challenges of few international connections and the risk that our central city environment may lose its vibrancy. You told us through the <i>Your city, our future</i> survey that ‘supporting businesses and industries’ should be one of the top four priorities for DCC expenditure.	It will build on our strengths of a strong knowledge base and a growing pool of creative and high-tech talent and enterprises. “Advocating for retention of our hospital and medical research capacity” was indicated as the highest spending priority in the <i>Your city, our future</i> survey.
How does this theme fit with other strategies and plans?	The Spatial Plan¹⁸ includes as one of six strategic directions ‘a city that enables a prosperous and diverse economy’. The Dunedin Digital Strategy¹⁹ also has strategic goals for Dunedin businesses to be digitally connected, capable and enabled.	One of the Dunedin Digital Strategy’s goals is to develop Dunedin ‘as a centre of digital innovation’. The Spatial Plan acknowledges the importance of business collaboration and physical clustering of similar businesses in attractive and visible locations. The Dunedin Visitor Strategy²⁰ has an overarching goal to increase the contribution of the visitor industry to Dunedin’s economic development. A city-wide Energy Strategy is being considered that will look at ways to reduce energy dependence and boost locally sustainable energy sources.

18 Dunedin City Council, *A Spatial Plan for Dunedin - Dunedin Towards 2050*.

19 Dunedin City Council, *Dunedin Digital Strategy 2010 to 2013*.

20 Tourism Resource Consultants, Angus & Associates, and Fermmade Limited, *Dunedin Visitor Strategy 2008 - 2015*.



A hub of skills and talent	Linkages beyond our borders	A compelling destination
This theme is about ensuring we build and retain the skills and knowledge of existing residents, as well as attracting the talent we need to Dunedin. This includes creating job and training opportunities for youth, reducing economic inequality, retaining skilled students as workers, attracting migrants to Dunedin, maintaining the relatively high knowledge and skills base that exists, and encouraging our labour force to continually up-skill.	This theme is about increasing our scale and opportunities for growth by working with others beyond Dunedin. It means attracting investment, making better international connections through our diaspora, linking Dunedin internationally, and playing our part in supporting the wider South Island.	This theme is about showcasing Dunedin's value proposition, revitalising the city centre, leveraging tourism and events and taking other steps to maintain a high quality of life, including ensuring environmental sustainability. It also means leveraging our sport, public art, cultural, leisure and recreational amenities to improve wellbeing and attract visitors, residents and commercial opportunities.
• Innovation and knowledge base	• Connectivity • Image and identity	• Amenities • Built and natural environment
It will help address the challenge of Dunedin being seen as a place to visit, rather than a long-term destination, and of reducing youth unemployment. It will build on our strength in having high quality amenities. 'More and better job opportunities' is a consistent theme arising from community engagement about the priorities for the DCC's expenditure.	It will help address the challenges of low international aspirations and not being seen as relevant to international migrants, businesses and investors. You told us that 'advocating for better connections in and out of the city' was a high economic development priority.	It will help address the challenge of Dunedin not being on the radar of international migrants, businesses and investors. It builds on our strengths of high quality amenities and having a cohesive community and high quality lifestyle. You told us that 'promoting Dunedin to attract visitors, workers and investors' was a high priority.
The Spatial Plan's 'a liveable city' strategic direction recognises the reputation Dunedin has for its quality schools and respected tertiary education institutions. The Social Wellbeing Strategy²¹ signals that Dunedin will be a welcoming community for migrants. The Dunedin Digital Strategy has a goal to raise digital literacy in the city and the Digital Office is leading projects to achieve this goal. The 'city that enables a prosperous and diverse economy' Spatial Plan strategic direction acknowledges that interaction between students, academic staff and the rest of the community prompts innovation, retention of talent in the city, and life-long learning.	The Spatial Plan's 'an accessible and connected city' strategic direction encompasses connectivity within the city, as well as maintaining Dunedin's hub role in the regional and national network. The Dunedin Visitor Strategy highlights as an objective 'increase collaborative marketing activities across the sector and neighbouring regions'. Additionally, attracting investors and ensuring good transport linkages are priorities.	Many of the strategic directions of the Spatial Plan are aligned with this theme: 'a memorable and distinctive city', 'a vibrant and exciting city', 'an accessible and connected city' and 'an environmentally sustainable and resilient city'. The Dunedin Visitor Strategy sets out to deliver marketing campaigns that target visitor markets with the best growth potential, as well as to increase collaborative marketing activities across the sector. The Social Wellbeing Strategy will explore cohesive community outcomes and the use of quality of life indicators in more depth.

²¹ Dunedin City Council, *Dunedin Social Wellbeing Strategy*.

**Bringing it
all together**



VISION	Dunedin is one of the world's great small cities. We are renowned as a confident, competitive knowledge centre, a community where enterprise and creativity support a productive and sustainable city.				
ECONOMIC GOALS	• 10,000 extra jobs over 10 years (requiring employment growth of approximately 2 percent per annum); and • An average \$10,000 extra income for each person (requiring GDP per capita to rise by about 2.5% per annum).				
BENCHMARKS	• Dunedin residents rate their quality of life the highest in New Zealand. • Dunedin has the highest proportion of the adult population with educational qualifications, when benchmarked against comparator cities. • Dunedin's export growth exceeds the national average over 10 years. • Dunedin has the highest proportion of workers employed in knowledge intensive industries, when benchmarked against comparator cities. • Dunedin's proportion of high growth businesses exceeds the national average. • Enterprise start-up rates exceed comparator cities.				
STRATEGIC THEMES	Business vitality	Alliances for innovation	A hub of skills and talent	Linkages beyond our borders	A compelling destination
OBJECTIVES	Improve ease of doing business Grow the value of exports	Improve linkages between industry and research Increase scale in innovative and tradable sectors	Increase retention of graduates Build the skills base Grow migrant numbers	Increase international investment Establish strategic projects with other cities	Enhance the city centre and environs Increase the value derived from tourism and events Improve the understanding of Dunedin's advantages
ACTIONS	Better support for exporting Red carpet, not red tape Unlocking land and development opportunities Business development through procurement	Grow innovative and internationally competitive industries and clusters in Dunedin Energy Strategy	Education and employment / self employment pathways Targeted talent attraction and retention	Dunedin Ambassadors programme Project Shanghai and China Business and investment attraction	Marketing Dunedin Export education uplift
KEY INDICATORS	Satisfaction with the DCC Uptake and availability of land and property Percentage of exporting businesses and value of exports	Business expenditure on R&D Employment in knowledge intensive and high tech sectors Number of business and industry-research collaborations	Graduate retention rate Qualifications of residents Percentage of New Zealand's recent migrants	Number and value of foreign investment projects Increased linkages with diaspora	Value of export education Length of visitor stay Visitor expenditure



STRATEGIC THEME 1:

Business vitality

This theme recognises that businesses thrive in an environment where it is easy to 'do business'. Four Actions are suggested, based on supporting exporting businesses, reducing red tape, exploring development opportunities within Dunedin and assisting businesses through procurement opportunities.

Making it easier to do business

By working with businesses to improve their performance and the city's business environment, the DCC can actively increase business vitality.

Businesses have told us that they want faster DCC processes, including building and resource consenting, and continuous improvement of District Plan rules. They have also told us of several other barriers to doing business, such as parking, transport, the cost of heritage upgrading and earthquake strengthening, and broadband. It is important that we have a proactive and business-friendly approach across the DCC.

We must protect our strong city centre. There are potential threats to the availability of suitable industrial land in the city, such as re-zoning for other uses and establishment of large format retail on industrial land. While there appears to be sufficient land (both Greenfield and Brownfield sites) to provide for future need, protecting existing land will be important, particularly as the economy continues to move from manufacturing to service-based activities. We must also ensure land and assets held by local and regional government are used more productively.

Broadband and digital communication technology make it easy to transact business in New Zealand and overseas, and help reduce the costs of Dunedin's distance. However, businesses have told us that they are not serviced by fast, high quality digital networks. Furthermore, what is on offer is expensive and not easy to connect to. Through the Government's Ultra Fast

Broadband (UFB) and Rural Broadband Initiative (RBI) programmes, Dunedin will increasingly be serviced by high speed broadband access. Schools are the initial focus. Businesses in Dunedin's central and industrial areas will increasingly have greater opportunity to connect to fibre as programmes develop. As part of Dunedin's Digital Strategy²², work is progressing to ensure residents and businesses have the capability to use the network to their advantage. This includes Digital Office leadership and actions to raise awareness about the UFB and RBI programmes through projects like the Digital Ambassadors and Digital Enablement programmes. The Digital Office is also leading projects to offer guidance on the technology advantages of fast broadband (for example, changes in business models, cloud computing, and unified computing).

There are also environmental and consumer 'megatrends' (eg expected increases in energy costs and changing consumer expectations) that will affect business. Business should be supported to anticipate and adapt early to take advantage of new opportunities rather than be caught by surprise by these changes.

Support for business growth and exporting

Dunedin businesses that are able to create and capture value in international markets are critical to Dunedin's economic performance, no matter what sector they are in. But only a small proportion of our businesses are export-facing,²³ and, while

²² Dunedin City Council, *Dunedin Digital Strategy 2010 to 2013*.

²³ Research First, *Dunedin City Council Business Survey*.



some of our businesses are performing well, many could do better.

There are many organisations in Dunedin that provide support in some way to the business community, whether through training, advice or access to offshore networks and investors. But we need our support to be seamless, so businesses can access the right support at the right time and at the right stage of the business lifecycle. We need to ensure our existing international businesses have access to the resources they need to grow, and to encourage the international ambitions of our many small businesses.

Councils and other large organisations in the city have significant purchasing power and have the opportunity to back local firms where feasible, and challenge them to innovate and secure work nationally and internationally. Comparator cities overseas tend to make a greater use of procurement to incentivise local innovation and retain spend within the city to the greatest degree possible. This includes using novel procurement practices such as outcomes-based procurement, awards programmes and procurement competitions to find local solutions to goods and services the DCC needs, as well as to solve city-wide and region-wide problems.

ACTIONS

Better support for exporting

Identify businesses in Dunedin with current and potential international opportunities, and ensure seamless delivery of support that will improve their growth prospects. Review and streamline existing support processes across agencies.

Project Convener: Otago Southland Employers' Association

Project Partners: Dunedin City Council, Otago Chamber of Commerce, University of Otago, Advanced Technology Institute, Ministry of Business, Innovation and Employment, UpStart, private business support providers

Red carpet, not red tape

Establish a Council/business relationship management model. Instil a proactive and business-friendly approach across the DCC. A business reference group will be established to contribute to and monitor this action.

Project Convener: Dunedin City Council

Project Partners: Otago Chamber of Commerce, Otago Southland Employers' Association, business representatives

Unlocking land and development opportunities

Review Dunedin City Council and others' land and property holdings to ensure maximum economic development value is extracted, while ensuring consideration is given to the protection of landscape values, biodiversity, recreation, heritage and the environment.

Project Partners: Dunedin City Council, Otago Polytechnic, University of Otago, Port Otago Ltd

Business development through procurement

Identify barriers for local small- and medium-size enterprises to participate in procurement opportunities. Explore, with other city and regional councils, the use of novel procurement practices to encourage innovation and growth in local firms.

Project Partners: Dunedin City Council, regional councils and central Government agencies

 STRATEGIC THEME 2:

Alliances for innovation

As a compact city, Dunedin lends itself to collaboration. The Actions suggested to advance this theme focus on using this advantage to grow our innovative and internationally competitive industries and exploring energy opportunities.

Business innovation is the application of new ideas in a commercial environment. It is a key driver of competitive cities. While good ideas may originate from one person or organisation, innovation is interactive and relies on collaboration. Dunedin's compactness should allow collaboration to occur to a greater extent than most other New Zealand cities.

Creating collaborative spaces

One of Dunedin's key potential strengths is the economic value that can be generated from the medical and related research that is undertaken by the University of Otago, Dunedin Public Hospital and the Otago Polytechnic. There are several examples of how a meeting of commercial and research objectives, and expertise creates businesses, including in the areas of probiotics (for example, BLIS Technologies' probiotic for mouth and throat), glaucoma drainage devices (Molteno Ophthalmic) and health

information systems (for example, Otago Clinical Audit's software for reviewing the performance of a surgical unit).

It is clear that the meeting of minds between entrepreneurs, researchers, businesses and scientists can lead to remarkable results and contribute to our city's economic performance. We must identify ways to encourage such collaboration and exchange. This can occur through networks and collaborative partnerships, and in physical facilities, precincts and spaces, where similar businesses and other organisations can be located near each other.

Dunedin has several facilities that could be supported to better connect research and science expertise with business, for example, the UpStart business incubator, the Distiller Lab (which offers shared space for technology-based start-ups), and the Centre for Innovation at the University of Otago.

Research shows that while physical facilities, precincts and incubators can foster collaboration through proximity, other linkages and support mechanisms (for example, business networks, business and innovation support services, access to venture capital and/or opportunities and incentives for collaborative projects between research, industry and academia) need to be in place to really kickstart collaboration and innovation.²⁴

In general, while Dunedin and New Zealand businesses and entrepreneurs are often not short of a novel idea or solution to a problem, they encounter difficulties in commercialising innovation. This can

include the ability to convert that idea to commercial scale, ensuring the product or service matches customer needs or having the capability to take that product/service to market. There are opportunities to improve the support that entrepreneurs and businesses receive in this area.

Building critical mass in our innovative and tradable sectors

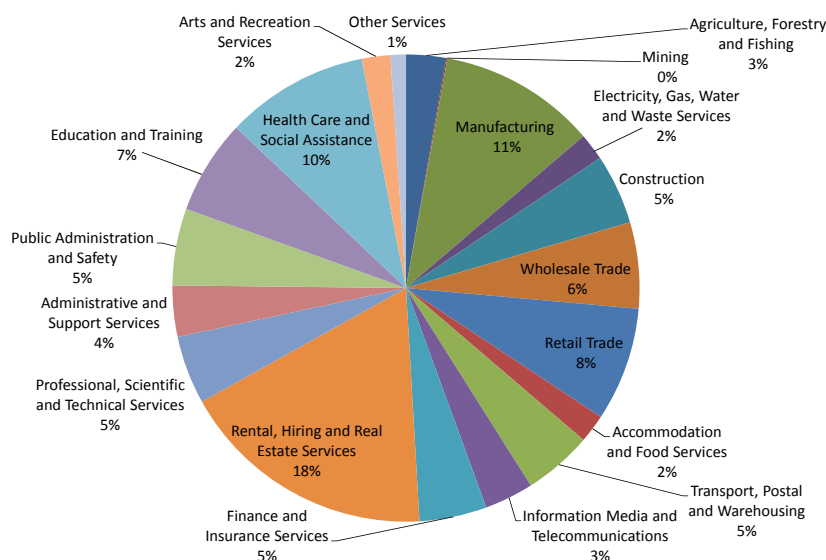
Dunedin also needs to build critical mass in high value, tradable sectors – sectors that are based on what we are already good at, our unique resources and existing knowledge.

Dunedin's economy is service oriented, like most cities internationally. Sectors that make a proportionally large contribution are property and business services, health and community services, education and retail trade. As discussed, our largest industries and businesses are generally not outward-facing.

While all sectors of the Dunedin economy make important contributions, there is a positive association between average incomes and international trade. The competition that is experienced through exporting improves productivity and innovation and enhances our ability to exploit economies of scale. While the actions of the Strategy apply to all businesses and organisations, we will pay special attention to internationally competing sectors.

24 OECD, *Regions and Innovation Policy*.

Industry contributions to Dunedin's GDP, 2011



Source: BERL regional database²⁵

There is an opportunity to build scale in export-facing sectors where we have growing capability and real advantages. This includes health technologies and biotechnology, primary and food and beverage processing, education, tourism, niche manufacturing and engineering, and ICT and creative content.

While we should build more scale and depth in these sectors, greater value may be obtained by identifying a nexus of interests between these sectors and how they can mutually support each other. For example, the health, education and ICT sectors in combination provide a platform of skills and technologies to support the development of health software and imaging, evidenced by best practice and businesses such as AD Instruments and Siliconcoach.

The identification of these critical export-facing sectors and platforms of complementary specialisations also provide a focus for other activity. For example, we should target our investment attraction and retention efforts to firms in these industries.

Potential implications of oil and gas

Seismic explorations for oil and gas have been undertaken off the Otago coast. Test drilling is planned about 65km offshore in 2013. If commercially viable quantities of oil or gas are discovered, Dunedin will become a supply base for this industry. The exploration rights and regulations are set by central Government, but this possibility has already sparked local debate. Some see it as a welcome potential boost for the local economy, while others fear the environmental risk posed by drilling.

From an economic point of view alone, a discovery of oil and/or gas would attract skilled, well-paid workers to Dunedin. The flow on from the company and staff spending would be significant. The oil and gas industry could significantly change Dunedin's economy and support other sectors, such as niche manufacturing and engineering. The challenge will be to ensure this growth is managed in a sustainable way. The DCC will continue to monitor developments to be ready to act in the event of discovery.

Collaborating to adapt

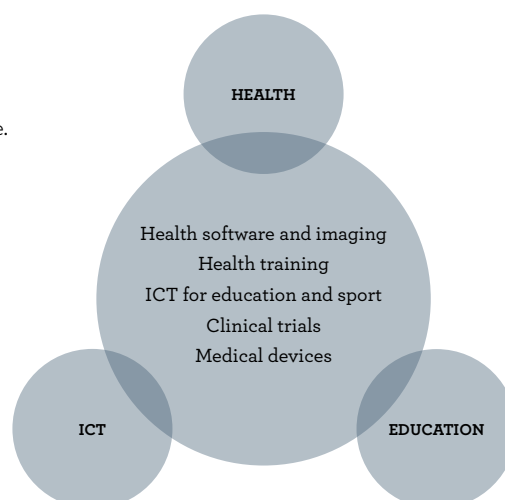
Dunedin organisations must join forces to anticipate environmental, energy and consumer changes and adapt in innovative ways to these.

A city-wide Energy Strategy is to be developed that will explore ways to reduce our energy consumption and find more secure and sustainable local energy sources to meet our needs.

This strategy is one step towards developing new models of achieving a low carbon, high value economy that will meet the changing expectations of local communities and international customers.

An example of complementary areas of specialisation

However, we also need to recognise that new and unforeseen innovations and specialisations may emerge from other industries in Dunedin in the future.



²⁵ BERL, *Economic Profile and Performance 2011: Otago Region* (year ended March 2011).

Innovative and internationally competing sectors in Dunedin

HEALTH TECHNOLOGIES AND BIOTECHNOLOGY

- Contributes \$330 million to the Dunedin economy.
- Research groups and innovative companies have evolved from the University of Otago and its medical schools.
- Key companies include Molteno Ophthalmic, Embryonic Diagnostic Research Group, Pacific Edge Biotechnology, LifeVent, Otago Osmometers, Otago Clinical Audit, Sir John Walsh Research Institute, Genomnz and Oritain.
- Dunedin's sporting facilities and tradition of excellence across a number of sporting codes also supports the health sector through training services.

PRIMARY AND FOOD AND BEVERAGE PROCESSING

- The primary processing sector contributes \$288 million in GDP. Within this, food and beverage processing contributes about \$240 million to the economy, although it has declined slightly over the last decade.
- The Invermay Agricultural Research Campus undertakes agricultural research including genomics, animal management, biocontrol and biosecurity.
- Port and transport infrastructure means that Dunedin has a key position in the Otago and Southland regions.
- Key companies include: Cadbury, Greggs, Bell Tea, Green Man Brewery, Gourmet Ice-Cream Company, Silver Fern Farms, Speights, Emersons.

EDUCATION

- Higher education is worth about \$200 million to the Dunedin economy (although it is unclear what proportion of this is from export education).
- Every year, Dunedin has about 3,000 international students from more than 80 countries.
- International students also study through Dunedin's primary schools, 12 secondary schools and a number of English-language schools.
- Growth has been marginal over the last decade. However, clear strength in this sector is built around the University of Otago and Otago Polytechnic.

TOURISM

- This is worth about \$180 million to the Dunedin economy.
- It has achieved an average of 4.2% growth over the last 10 years.
- It is a natural fit with Dunedin's gateway role and quality natural amenities (including significant public conservation land). Guest arrivals and guest nights are up about a third since 2000, although there has been little movement in the average length of visitor stays.
- Key attractions include: Taieri Gorge Railway, Forsyth Barr Stadium, Cadbury, Larnach Castle, Royal Albatross Centre. New products over the last few years include Dunedin Chinese Garden, Orokonui Ecosanctuary, and food and wine tours.

NICHE MANUFACTURING AND ENGINEERING

- This is worth almost \$183.2 million to the domestic economy.
- It is a high productivity sector, and has a mature and well-functioning engineering cluster.
- There is potential for Dunedin to be the supply base for oil and gas industry in South Basin areas.
- Key companies include: Escea, Scott Technologies, Milmeq, Farra Engineering and DC Ross.

ICT AND CREATIVE CONTENT

- ICT sector is worth about \$140 million and the creative sector contributes about \$55 million in GDP, with film, video and television services contributing \$17 million within this.
- ICT sector has achieved moderate growth over the last decade although creative, film and television has declined.
- Capability is based on historical investment (e.g. Natural History New Zealand)
- Key companies include: AD Instruments, Animation Research Ltd, Natural History New Zealand and Siliconcoach.

ACTIONS

Grow innovative and internationally competitive industries and clusters in Dunedin

Ensuring our innovation support mechanisms are appropriately structured and co-ordinated.*

Create action plans to build scale in internationally competing industries (for example, through clusters, precincts, improving connections to R&D expertise). This will include:

- Pursuing opportunities to expand the economic value from the combination of health, education and ICT capability in Dunedin, such as becoming an active partner in the national health innovation hub and better connecting health technology businesses with the R&D capability that exists in the University of Otago.
- Supporting collaboration and networking of creative companies, for example, through the proposed Warehouse Precinct.
- Developing an agricultural science innovation precinct at the Invermay Agricultural Research Campus, and better connecting businesses to the R&D expertise that exists at AgResearch.

*Project Convener (*initial phase):* University of Otago

Project Partners: Dunedin City Council, Otago Chamber of Commerce, Otago Polytechnic, Otago Southland Employers' Association, Advanced Technology Institute, AgResearch, industry groups (eg ICT cluster), Ministry of Business, Innovation and Employment, New Zealand Trade and Enterprise, Southern District Health Board, UpStart

Energy Strategy

Develop a strategy that will allow us to understand the economics of low carbon cities, identify the economic benefits of reducing energy demand and carbon emissions to Dunedin's economy and make practical recommendations about the development of a local energy infrastructure that accelerates the decarbonisation of the local economy and opens up commercial opportunities for local business.

Project Convener: Dunedin City Council

Project Partners: Ngāi Tahu, Otago Chamber of Commerce, Otago Polytechnic, Otago Southland Employers' Association, University of Otago

STRATEGIC THEME 3:

A hub for skills and talent

Businesses in Dunedin need good people at all levels of their operations to improve productivity and grow. Two Actions are proposed. The first concentrates on employment pathways for school and tertiary students, the unemployed, and skilled migrants and partners. The second is about attracting talent to Dunedin.

Businesses need talented people to manage them, and to create and generate high-value products and services. The knowledge and skills base in Dunedin is relatively high, built on the strengths of the University and the health sector, as well as the professional services sector and high-value manufacturing industry. It is important that we work hard to retain our existing businesses and workforce, and provide them with opportunities to continually up-skill, be challenged, grow their careers and create new enterprises. However, this is against a backdrop of slow population growth and an aging population.

Some believe that Dunedin has the capacity for 20,000 – 30,000 extra residents and that this would boost the economy significantly. Dunedin has good infrastructure and a population increase of this magnitude would create more local demand.

Research has shown that the key reasons why people are unwilling to move to Dunedin are a perception of a lack of job or business opportunities, and a cold climate.²⁶ While we can argue the reality of this, these perceptions need to be overcome to achieve a significant population increase.

Furthermore, while an increased population would spark job opportunities, without job opportunities, we are unlikely to spark population growth.

Amenities and other draw cards also attract and retain talent – such as a stunning natural environment, safety, an abundance of recreational opportunities, and a cohesive community. It is clear that Dunedin has these in spades but we have not yet effectively promoted these to the world (see Strategic Theme 5).

Retaining our graduates

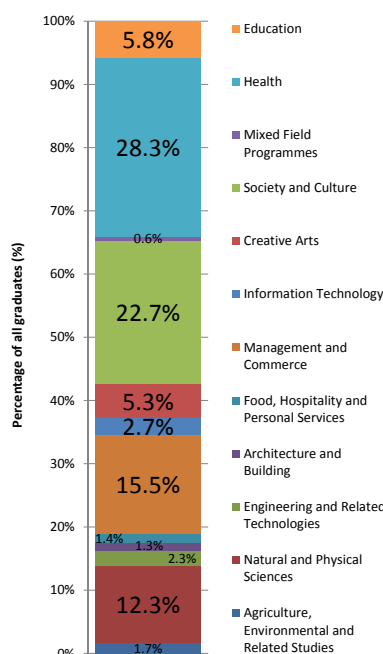
Some 22% of Dunedin's residents are students (about 25,000 people).²⁷ A high proportion of tertiary students, including approximately 80% of University of Otago students, come from outside Dunedin²⁸ and do not stay after completing their studies.

Dunedin must take the opportunity to chart employment pathways for graduates from its tertiary institutes and demonstrate how they can grow their careers in the city. Given the specialisation of the city's tertiary institutions, there are proportionately more graduates in health and society and culture, and far fewer in architecture, building, engineering and related technologies.

By doing more to match graduates to opportunities in Dunedin, we should retain a higher proportion of graduates in Dunedin.

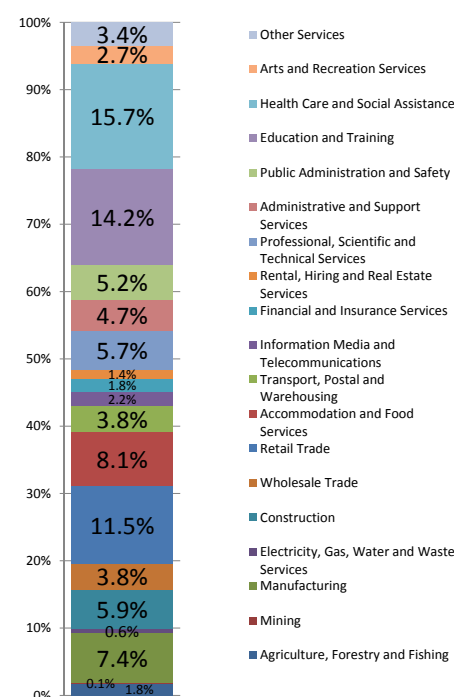
However, industry employment in Dunedin paints a different picture to the specialties graduates are majoring in.

Graduates from Dunedin-based tertiary institutions, 2006 - 2010



Source: Ministry of Education, Counts database²⁹

Industry employment in Dunedin city, as at February 2011



Source: Statistics New Zealand, business demography tables³⁰

²⁷ Dunedin City Council, *About Dunedin: Facts and Figures*.

²⁸ University of Otago, *Campus Master Plan*, University of Otago, New Zealand.

²⁹ Ministry of Education, 'Provider Summary: Enrolments, EFTS, Completions, Revenue and Surplus.' *Summary Tables - Education Counts*.

³⁰ Statistics New Zealand, 'NZ Business Demography Statistics'. *NZ Business Demography Statistics*.

We have employment opportunities in science, technology and engineering. While there are many science graduates, there are few engineering and technology graduates. Our key companies need engineers and most are sourcing them from elsewhere in New Zealand or offshore. Increased activity in seismic strengthening of our buildings will also increase demand for architecture, engineering and related skills. While some businesses are not facing current skill constraints in this area, future-proofing needs to be considered.

Dunedin is a key supplier of health graduates and early childhood/primary/secondary teachers for the nation. The nexus between health, education and ICT provides exciting prospects for graduates. Graduate programmes and placements are ways to facilitate the transfer of our students into Dunedin's workforce. Initiatives in this area are already underway including Sexy Summer Jobs and the Audacious Business Challenge.

Lifelong learning

Our city provides great opportunities to learn and, by default, we should be a 'learning city'. Ideally our residents will be passionate about continual learning and improvement, as this will lead to improved productivity of our workforce. Survey data suggests that adults in the South Canterbury and Otago region are undertaking less formal or non-formal learning (not counting towards a qualification) than adults in other regions.³¹ While industry training participation in Dunedin is broadly in line with other main centres (4.3% of all industry trainees were from Dunedin - 5,415 of 124,923 trainees in 2008³²), residents of a learning city should over-perform in this regard. We need to do more to connect our residents into the learning system and to ensure our education providers are tailoring their offerings to the needs of non-traditional students.

Capable New Zealand at Otago Polytechnic is one example of extending learning opportunities. Its Centre for Assessment of Prior Learning (CAPL) process means that knowledge and skills gained over one's life and work can count towards a range of formal qualifications.

The Dunedin Digital Office has started programmes to raise digital literacy and capability across the city and to bridge the gap between those who understand technology and those who do not.

Accessing skills from around New Zealand and globally

Migration is another avenue for accessing skills and knowledge for Dunedin. Migration has been associated with innovation, improved international connections and improved productivity. Net migration to Dunedin has fluctuated over the past 15 years, and Dunedin has experienced more years of negative net migration compared to New Zealand as a whole (although net migration has recently rebounded).

Generally, Dunedin does not attract a significant proportion of New Zealand's recent migrants.³³ Recent research suggests we should be more targeted in our talent attraction approach.³⁴ We need to identify real business job opportunities that will attract talent and tailor our settlement processes to the types of talent we need to attract.

Youth unemployment

The picture of Dunedin's youth unemployment is somewhat distorted by its large student population. For example, Dunedin's youth unemployment rate is 16.8% while the national average is 13.3%.³⁵ But, in 2006, Dunedin had a particularly low rate of youth that were not in employment, education or training (NEET) of 6.7%, against a national average of 12.5%.³⁶ Proportionately, more young people are also staying in school and leaving with qualifications.³⁷ However, unemployment benefit figures tell another story. In the June 2012 quarter, 34.3% of Dunedin's unemployment beneficiaries were aged between 18 and 24. Nationally, 26.4% of unemployment beneficiaries were youth.³⁸

In addition to Dunedin's graduates, we must also offer good opportunities for all. This means charting pathways to employment for the city's young unemployed population and matching them to learning and employment opportunities.

IN ACTION: Matching talent with businesses

AgResearch and University of Otago Summer Intern Scheme

This scheme introduces 3rd and 4th year tertiary science students who intend returning to university for further study to the rigours and demands of research in a working science environment. The scheme involves students completing a specific science project drawn from AgResearch's local programmes. The scheme gives potential science graduates exposure to research in the real world, while giving students and AgResearch a view of future employment opportunities.

Department of Conservation Youth Development Programme (Conservation Corps)

A 10-week programme including conservation work with the Department of Conservation and community groups, challenging outdoor recreation and future-focused education and personal development. Students have gone on to tertiary study and employment in related areas. Students report increased confidence, increased clarity about their own values and goals and more engagement with their community.

31 Lane, *Adult Literacy and Numeracy in New Zealand: A Regional Analysis. Perspectives from the Adult Literacy and Life Skills Survey.*

32 Tertiary Education Commission, *Industry Training Statistics 2008.*

33 Statistics New Zealand, 'Culture and Identity - Statistics New Zealand'. 2006 Census Population and Dwellings Tables, Birthplace and Years Since Arrival in New Zealand, 2007.

34 Uber, *The Insiders Guide to Dunedin: Qualitative Research Prepared for Dunedin City Council.*

35 Ministry of Youth Development, 'Youth Statistics: A Statistical Profile of Young People in New Zealand'. *Regional Facts and Stats - Dunedin City.*

36 Tertiary Education Commission, *2010 Regional Briefing: Otago.*

37 Ministry of Youth Development, 'Youth Statistics: A Statistical Profile of Young People in New Zealand'. *Regional Facts and Stats - Dunedin City.*

38 Ministry of Social Development Centre for Social Research and Evaluation, *Benefit Fact Sheets.*

ACTIONS

Education and employment/self employment pathways (building and matching talent to meet business needs)

Establish a programme of employment and training pathways to meet business needs, building skills to fill skill gaps and encouraging life-long learning. Target markets include unemployed, youth unemployed, skilled migrants and partners, students and international students. This will draw on lessons learned from current programmes.

Project Partners: Dunedin City Council, Ngāi Tahu, Otago Chamber of Commerce, Otago Polytechnic, Otago Southland Employers' Association, University of Otago, Careers Service, Digital Office, Immigration New Zealand, Ministry of Business, Innovation and Employment, University Students' Association/ Student Job Search, Work and Income New Zealand, businesses, community organisations, private training establishments, recruitment agencies, secondary schools

Targeted talent attraction and retention

Design and deliver a talent attraction and retention programme, based on offering specific job and business opportunities in Dunedin to migrants who meet the city's capability needs. This could also involve partnering with other neighbouring city and regional councils.

Project Partners: Dunedin City Council, Otago Chamber of Commerce, Otago Southland Employers' Association, Immigration New Zealand (Settlement Support), KEA, Otago Regional Council, businesses, district health boards, recruitment agencies, tertiary institutions

STRATEGIC THEME 4:

Linkages beyond our borders

Dunedin cannot reach its economic goals if it does not work with others. The first Action involves identifying ex-Dunedin people to act as ambassadors. The second proposes profiling Dunedin opportunities in Shanghai and China and the third is focused on attracting business and investment to the city.

Dunedin is on the edge of the world, but that does not mean we have to isolate ourselves.

Feedback tells us that our residents view 'fostering stronger relationships with people who studied in Dunedin, so they invest in, return to, or support Dunedin' and 'strengthen the links between industries and businesses across the Otago region' as high economic priorities.³⁹

Regional linkages

Dunedin is small, but there are opportunities to increase scale through working with our neighbours, as well as other cities in New Zealand. We are already working with Auckland, Hamilton, Tauranga, Wellington and Christchurch to better understand our complementary strengths and opportunities for working together. This could mean, for example, working with Auckland to examine a Dunedin presence within Auckland-based innovation precincts. The University of Otago already has significant campuses in Wellington and Christchurch; the University and Otago Polytechnic both have bases in Auckland. These footholds could be used to help Dunedin become more relevant to these cities.

On our doorstep are the Southland, Queenstown Lakes District and wider Otago regions. There is some healthy competition occurring, but we need to make sure that we collaborate to compete on the world stage, rather than compete amongst ourselves. Otherwise we risk being less than the sum of our parts, and being too inward focused and parochial, while other cities and regions band together and leapfrog us. Dunedin needs Otago, and Otago needs Dunedin.

Tourism is one area where we can leverage each of our strengths to create competitive advantage. Queenstown is known for adventure tourism, Central Otago is wine country, Te Anau and Fiordland have World

Heritage Status and the Great Walks, and Dunedin is a regular stop over for cruise ships. We can band together to give visitors, and potential residents, a tourism experience like no other.

Christchurch has suffered terribly in the September 2010 and February 2011 earthquakes. We need to identify tangible ways we can use our industrial strengths to support the earthquake recovery efforts. This could mean lending support through our experience with earthquake strengthening, partnering with Christchurch businesses on international sector marketing efforts, secondments in the niche manufacturing and engineering sector, formal relationships with the University of Canterbury Engineering School, and running business exchange programmes.

Diaspora

Our past residents and students take an active part in the international community, and they are an untapped source of talent, investment and international connections. They work in, own and manage large multinational companies. They are big investors in their own right and are at the forefront of new knowledge, science and research (for example, University of Otago alumni hold senior positions in ANZ Banking Group, Pfizer Inc, Sangamo BioSciences, Lockheed Martin and KPMG San Francisco).

The University of Otago alone has more than 80,000 registered alumni, with over 55% living beyond the South Island, including over 20% overseas. Research shows that alumni are positive about the city and keep up with its progress. However, their perception of a lack of well-paid jobs and the climate are barriers that prevent many from returning.⁴⁰

AlumniConnect Otago also has 30,000 ex-students from the Otago region registered.

³⁹ Dunedin City Council, *Your City, Our Future: City-wide Postal Survey Report July 2011*.

⁴⁰ Ignite Research, *Marketing Campaign Evaluation: Summary Report*.

We need to engage our diaspora in a meaningful and targeted way. This may include alerting them to job opportunities and positive changes in Dunedin. Additionally, there is a role for these people to act as city ambassadors – providing valuable business and market contacts, and making direct investments.

China and sister cities

Dunedin also has formal international links through the sister cities programme, including with Edinburgh (Scotland), Otaru (Japan), Shanghai (China) and Portsmouth (USA). The Portsmouth relationship is largely dormant, but there are strong, mostly culturally-based linkages with the others. There is an opportunity to explore the extent to which greater economic value can be extracted, particularly where trade and investment relationships can be built and maintained via flight access. Given that Dunedin's relationship with Shanghai is the most advanced, and the city is directly connected via ports and other networks to New Zealand, this has the most potential to expand trade and investment activities.

The Dunedin-Shanghai relationship is strong culturally and politically. It was pivotal in the development of the Dunedin Chinese Garden, establishing a relationship with the Shanghai Museum and identifying and commissioning the appropriate China-based garden construction contractor. This provides a strong platform for building trade and investment relationships with the financial capital of China and China's largest port of entry for goods and services.

This does not mean we will exclusively focus on Shanghai in the future. Other cities in China, other sister cities, and potential alternative ones, will be assessed as to whether more business and investment opportunities can be leveraged.

Dunedin needs Otago,
and Otago needs Dunedin.

Air linkages

A key enabler of international connections, other than ultra fast and quality broadband, is air links. The Dunedin International Airport has a daily schedule of flights to Auckland, Wellington and Christchurch (with onward connecting flights to other New Zealand destinations). There are some direct flights also available to Australia and long-haul international flights available via Auckland and Christchurch. Four airlines operate from Dunedin International Airport - Air New Zealand, Jetstar, Pacific Blue and Mainland Air. Passenger movements from and into Dunedin are much lower than in larger centres like Christchurch, Wellington and Auckland. While frequency is a continuing issue hampering our connectivity to the world, so too is cost. We must work with our airlines, airport, businesses (in tourism and other sectors) and residents to ensure air linkages meet our requirements.

Our ports and rail network also play a vital role in moving people and freight. The supporting road transport infrastructure needs to connect people and freight efficiently to these hubs.

Business and investment attraction

Other parts of this Strategy have discussed how we can create and support new businesses, and facilitate the sectors and businesses we already have to innovate and improve their performance. However, we can also encourage new and more businesses and investment to enter and stay in Dunedin.

We need to bring new opportunities into the city, through proactive business and investment attraction. In doing so, it is timely to re-examine Dunedin's existing investment opportunities and develop a strategy for attracting international projects and investments consistent with our Economic Development Strategy.

ACTIONS

Dunedin Ambassadors' programme

The programme will identify ex-Dunedin residents to mentor Dunedin businesses, attract inward investment, and potentially provide employment pathways and connections.

Project Convener: University of Otago

Project Partners: Dunedin City Council, Ngāi Tahu, Otago Chamber of Commerce, Otago Southland Employers' Association, University of Otago, AlumniConnect (secondary schools), KEA, New Zealand Trade and Enterprise, Tourism Dunedin, multinational companies

Project Shanghai and China

Identify specific two-way trade and investment opportunities (including for talent and education) between Dunedin and Shanghai, including assessing the extent to which political and Shanghai city ownership interests can be leveraged for the benefit of Dunedin businesses.

Shanghai will be the initial focus and, if successful, similar approaches will be made with other cities in China and offshore, incorporating lessons learned from Shanghai.

Project Convener: Otago Chamber of Commerce

Project Partners: Dunedin City Council, Otago Chamber of Commerce, Otago Southland Employers' Association, University of Otago, Otago Polytechnic, Ministry of Foreign Affairs, New Zealand Trade and Enterprise, Shanghai Association, Tourism Dunedin, business leaders

Business and investment attraction

A programme to identify and profile potential offshore investors and companies, business and R&D investment opportunities in Dunedin, and facilitate the matching of the investors with the opportunities. This will include developing collateral that articulates Dunedin's value proposition to businesses and investors in New Zealand and offshore (including through www.DunedinNZ.com).

We will also work with other regional and local councils in undertaking investment attraction efforts in order to ensure we get greatest value from our collective efforts.

Project Partners: Dunedin City Council, Ngāi Tahu, Otago Chamber of Commerce, Otago Polytechnic, Otago Southland Employers' Association, University of Otago, Immigration New Zealand, KEA, Ministry of Business, Innovation and Employment, New Zealand Trade and Enterprise

STRATEGIC THEME 5:

A compelling destination

Dunedin provides a great lifestyle and we need to ensure this continues for our existing and potential new residents and business. The emphasis needs to be on leveraging existing assets, natural features and historical investments. The two proposed Actions are to review the case for a Dunedin marketing agency or coordination point and to develop an export education strategy specific to Dunedin's needs.

Compelling Dunedin

While job opportunities may attract some to Dunedin, it is the lifestyle that will make them stay. This means providing a quality and attractive built environment, protecting our natural environment, and providing exciting cultural, sporting and recreational activities and venues.

We must evolve from primarily selling the city to visitors and students, to offering compelling stories that inspire public and private investors, skilled staff and ambitious entrepreneurs to focus their efforts here. We need to understand these groups' needs and develop innovative and collaborative ways to build their confidence – so Dunedin is a natural choice for them. Ultimately, we want visitors to come back to live, work and invest and our residents to stay.

Urban destination

While we have an unparalleled natural environment, we cannot rely on this alone to attract and retain talented people. We need to make sure our urban centres are as appealing as our natural resources. Much of this vision has been expressed in our draft Spatial Plan.

Our Ngāi Tahu cultural heritage is a distinctive element and needs to be acknowledged. Visitors to, and residents of, Dunedin are afforded an accessible, meaningful and authentic interpretation of Ngāi Tahu historic and contemporary culture. This can be expressed more fully by increasing its visibility through events and integration into urban design (for example, in public spaces and architecture).

The central city is Dunedin's commercial heart but more can be done to provide a safe and pleasant environment for residents, visitors and businesses. This includes designated public spaces, revitalisation of parts of the city, encouraging heritage restoration through rates relief policies, improving infrastructure for walking and cycling, enhanced access to the harbour, and

more clearly defined industrial precincts. In revitalising the city centre, attention needs to be paid to the quality of the retail, entertainment and dining offering.

Additionally, our city is more than the central business district. The draft Spatial Plan acknowledges the need to revitalise our suburban and rural centres, within the context of a hierarchy of the roles and functions they serve (principal suburban, suburban, neighbourhood, rural and destination). At the same time, there are demands to increase commercial presence beyond the central city and established centres. However, with a current over-supply of commercial buildings and a risk of reducing the buzz of the central city, these forces need to be carefully managed.

All of Dunedin must be attractive and easy to live and work in. This means that beyond the city centre, Dunedin must exhibit high quality foundations and amenities, including quality housing, public transport, safety, recreation and open space, heritage areas and infrastructure.

Leveraging visitors

Tourism is an important part of the Dunedin economy, contributing almost 4% of GDP and 6% of employment.⁴¹ But there is a need to increase the length of stays, and for visitors not to treat Dunedin as a 'pass through'. Dunedin's tourism expenditure is domestically focused, as domestic tourists contribute more in expenditure than international tourists.⁴² Most domestic visitors are from the South Island; most international visitors are from Australia, the Americas, the UK and Nordic nations.

Dunedin has already created a strategy to ensure that the visitor economy continues to increase its contribution. Dunedin has a goal of being a premier regional tourism destination by 2015.⁴³ A series of objectives and actions has been outlined in the Dunedin Visitor Strategy, implemented in 2008. It recognises the platform of key tourism products we already have which

41 BERL, *Economic Profile and Performance 2011: Otago Region* (year Ended March 2011).

42 Tourism Resource Consultants, Angus & Associates, and Fernmade Limited, *Dunedin Visitor Strategy 2008 - 2015*.

43 *Ibid*.



we can build off including the Dunedin Botanic Garden, Orokonui Ecosanctuary, Larnach Castle, Cadbury, the Royal Albatross Centre, Taieri Gorge Railway and our sporting events and venues. The Visitor Strategy actions include increasing visitor nights and market share, developing more cost-effective marketing campaigns (that target visitors with the best growth potential for Dunedin), expanding the range of tourism attractions and activities, and improving management of Dunedin as a visitor destination.

As well as being important in its own right, tourism supports other sectors by drawing on a range of inputs, for example food and beverage and ICT, but more value could be leveraged from the sector. This includes linking tourism to the education sector, through co-ordinated international education marketing or tourism experiences targeted at families visiting international students.

International education

Between 2001 and 2011, the number of international students studying at the University of Otago more than doubled, to the point at which total international enrolments almost reached the University's self-imposed cap of 12% of total enrolments. Otago, which ranks third amongst New Zealand universities for the proportion of international students in its roll and for total revenue received from international students, is likely to raise its international cap to 15% of total enrolments going forward. Otago Polytechnic seeks to grow international student enrolment from its current base of 6% to 20% of all enrolments. International students also study in Dunedin's primary, secondary and English language schools.

The international education sector has the potential to provide significantly more value to Dunedin, to provide services and education offshore, and to be incorporated into destination marketing efforts.

International education products include the development and marketing of summer school courses for international students, short courses for postgraduate international students and for professional development.

Events

Events contribute to the buzz of a city and attract visitors and potential residents. Signature Dunedin events include Dunedin Cadbury Chocolate Carnival, International Science Festival and iD Dunedin Fashion Week. Dunedin has already adopted an Events Strategy, which includes developing a portfolio of exciting events that appeal to residents, contribute to social wellbeing and celebrate a culturally rich city – while also optimising the economic contribution of festivals and events to Dunedin.

Relevant actions include prioritising events that showcase and are supported by key industries in Dunedin, prioritising funding for premier festivals and events that strongly identify with city marketing and promotions, and basing investment decisions for premier events on projected economic forecasts and economic impact assessments. The completion of the Forsyth Barr Stadium, Toitū Otago Settlers Museum and the refurbished Town Hall provide the opportunity to host more significant events and extract more economic value.

Dunedin also has many recreational and sporting opportunities built around the Otago Harbour, coast, track networks and high quality facilities (for example, the Edgar Centre, Forsyth Barr Stadium, Dunedin Ice Stadium and Dunedin Centre of Excellence at Logan Park). The marketing of Dunedin and events needs to include Dunedin's sporting advantages and cultural institutions.

ACTIONS

Marketing Dunedin

Review the case for a Dunedin marketing agency or mechanism that co-ordinates tourism, events, investment, skills and migrant promotion and attraction efforts. The agency would likely play a key role in the talent, education and investment attraction actions noted elsewhere in this strategy.

Project Convener: Dunedin City Council

Project Partners: Brand Partners (Allied Press, Dunedin Venues Management, Otago Chamber of Commerce, Otago Polytechnic, Otago Southland Employers' Association, Tourism Dunedin, University of Otago) Ngāi Tahu, New Zealand Trade and Enterprise

Export education uplift

Develop an export education strategy and action plan to support education providers to attract international students, to develop local education businesses and providers with export potential, and to leverage export education to attract and retain talent and support other sectors (including tourism) in Dunedin.

Project Convener: Otago Polytechnic

Project Partners: Dunedin City Council, Otago Polytechnic, University of Otago, Education New Zealand, Secondary Principals' Association NZ, Tourism Dunedin, English language schools, private training providers, primary and secondary schools

Implementation

Dunedin can be a great small city – one of the greatest – but this Economic Development Strategy will only be effective if there is strong commitment to and resourcing for the proposed Actions. A total of 13 Actions are proposed across the five themes. However eight have been flagged as requiring immediate attention.

Several initiatives are already underway and offer a solid base, while other existing programmes may need to make way – freeing up resources – to focus on new priorities. Some of the initiatives already underway that support this Strategy are:

Turning ambition into profits (Business vitality)

UpStart business incubator has started a project to refresh how the city backs entrepreneurs. Otago Polytechnic, University of Otago, the Dunedin City Council and a number of entrepreneurs are working to join the dots better to ensure that we give the best possible support to those with the most potential.

Alumni re-engagement (A hub for skills and talent)

Eleven Otago schools are enrolled in the AlumniConnect network with 30,000+ ex-students enrolled within a centrally managed service. The Otago region has a page on the Kiwi Expats Abroad (KEA) website.

Such networks will be used to inform and inspire alumni to donate and/or invest, work in, or support Dunedin.

Students embracing summer in Dunedin (A hub for skills and talent)

In the summer of 2011/12, more than 70 tertiary students stayed in Dunedin and used their skills in local businesses, while a dozen others stayed to work on their own business ideas. The 'Sexy Summer Jobs' internships offered employers a subsidy and helped match-make local businesses looking for talent with bright students, while Audacious offered a working space and mutual support to student entrepreneurs. Experience shows that a third of these interns will get ongoing work locally, while a number of students have now launched their own businesses in the city.

The eight priorities were selected by the Economic Development Strategy steering group on the basis of the following criteria:

- Potential impact – the Action is likely to have sizable impact on the economy and achieving the Strategy's economic goals
- Practicality – the Action can be implemented and managed relatively easily
- International orientation – the Action has the potential to increase export earnings, overseas investments and/or migration
- Collaboration – the Action involves a number of partners
- Leverages existing investments – the Action builds on current work or investment
- Alignment – the Action is consistent with other local and national priorities

Additionally, these eight Actions are mutually reinforcing and should be developed in concert.

INITIAL ACTIONS

Better support for exporting: There is a mix of organisations, grants and advice currently available to ambitious businesses. It is time to independently assess what effect these have on businesses in our innovative and tradable sectors, and whether there are other ways to boost success.

Dunedin Ambassadors' programme: Expats and friends of Dunedin offshore can help connect exporting businesses with customers, investors and talent.

Export education uplift: Identifying and targeting opportunities to attract international students into Dunedin and to boost the provision of education products and services offshore.

Grow innovative and internationally competitive industries and clusters: The initial phase of this project will focus on ensuring our support mechanisms are appropriately structured and coordinated to maximise the commercial potential from innovation.

Marketing Dunedin: Consider the case for an agency or mechanism to coordinate the city's marketing efforts. It will look at both the variety of people that Dunedin needs to attract such as investors, skilled staff and visitors and also how we market to these groups.

Project Shanghai and China: Identifying business and investment opportunities in Dunedin that can be profiled in Shanghai. The project will need to be formed by the investment and talent plans.

Red carpet, not red tape: Dunedin City Council will refine its processes and communication to instill a proactive, 'business friendly' approach across the organisation. This will include learning from approaches used by other councils.

Energy Strategy: Develop a strategy that will allow us to understand the economics of low carbon cities and make practical recommendations about the development of a local energy infrastructure that accelerates the decarbonisation of the local economy and opens up commercial opportunities for local business.

The Dunedin City Council will continue to work with private sector and non-government bodies to deliver on these actions and others in the Economic Development Strategy. The Economic Development Strategy Steering Group – currently comprising representatives from the Dunedin City Council, Otago Chamber of Commerce, Otago Southland Employers' Association, University of Otago, Otago Polytechnic and Ngāi Tahu – will continue to oversee the Strategy, provide advice on implementation and monitor progress on the actions under each strategic theme. Tourism Dunedin, the Digital Office and New Zealand Trade and Enterprise will be invited to join the group. Additional private sector representatives and advisors from outside Dunedin may also be added to the group. It will report to the partner organisations on progress. The implementation structure is shown below.

Economic Development Strategy implementation structure



Project teams from key delivery organisations will be formed to develop implementation plans for the Actions under each strategic theme, with clear milestones. The plans will provide clarity about how each of the Actions will be delivered, by whom, and over what timeframe. In some cases, Actions can be delivered relatively quickly (for example, the Better Support for Exporting and Marketing Dunedin actions, where preliminary work is underway). In other cases, feasibility studies or business cases will need to be developed to determine how the Actions should be best implemented.

We are not alone in delivering and implementing an economic development strategy. We need to learn from the successes (and mistakes) of others. We will draw on expertise from outside Dunedin, outside Otago and possibly outside New Zealand.

The project teams will help prioritise the Actions, liaise with businesses and stakeholders involved in the delivery of various Actions, and monitor and evaluate progress against Actions.

The DCC will also ensure that the Actions are incorporated into its Long-Term Community Plan.

This Economic Development Strategy sets the strategic direction and is not an implementation plan. The development of an implementation plan with more detailed timelines, measures, resourcing (including allocation of resources by the DCC and Strategy partners) will be part of the next phase of work. This implementation plan will be released publicly.

Guiding Principles

In order for the Strategy to be a success, we recognise that there needs to be a step change in the approach and attitude of the city, and those within it. We are facing new challenges and opportunities, and need to be equipped to deal with them. We have identified a set of guiding principles – or values – that will underpin the implementation of this Strategy.

1. Work in collaboration and partnership

No one organisation or person by themselves can change the course of Dunedin's economic trajectory. Local and central Government, business, not-for-profit organisations, iwi, and research and education institutions must all work together in an environment of mutual trust, pooled resources and a shared vision. The formation of the Economic Development Strategy Steering Group is one way this has already occurred, but our task is significant and the issues and opportunities diverse. We will need to work hand in hand with the city's many different organisations and also co-ordinate with other relevant strategies.

Partnership must be the default position for all future initiatives.

2. Support courageous leadership

We have already embarked on partnerships to develop the Strategy. It has bold projects and goals that require courageous leadership and decision-making. We and our partner organisations will champion the economic development vision and the projects, taking responsibility for bringing them to fruition.

3. Welcome diversity

Dunedin is made of up a diverse group of individuals, households, employees, businesses and organisations. We need to ensure that everyone has the opportunity to contribute to the implementation of the Strategy. We must continue to encourage different viewpoints and test our assumptions.

4. Ensure excellence and encourage innovation

We need to make sure we do a good job. Our city and economy depend on it. We are encouraging excellence and innovation through the Strategy and we must therefore model this behaviour also. In doing so, we must be open to doing and trying new things, and strive for continuous improvement. We must also share lessons learnt and celebrate successes.

5. Enable people to get on with making the Strategy a reality

We want to facilitate an environment that makes things happen and gives people the authority and tools to deliver.

6. Be proactive and flexible

We will be proactive. We will review the Strategy regularly and be open to adding new projects or modifying projects to enable better outcomes. We will also seek advice from others to make sure we are heading in the right direction, and/or to develop our evidence base. We must shape projects and initiatives to the constantly changing economic environment and international market.

7. Keep an eye on the future

We need to make sure our economy is resilient and able to respond to challenges, such as climate change and fiscal imbalances, adapting quickly and making the most of the opportunities on offer. We are learning that ensuring long-term economic success has to be built on enhancing and protecting strong communities and a good natural environment.

Monitoring and evaluation

Results will be measured to ensure we are meeting our goals and achieving our vision. We have already identified a range of potential measures to help assess progress on the five themes. The measures will also help to identify when we need to change course, as well as when we should celebrate success.

As part of the implementation process, we will develop a monitoring and evaluation framework. This will provide a plan for when, how and what we will measure and assess. We intend to:

- Deliver a summary progress report on the themes and Actions, including reporting on outputs, intermediate objectives and measures of success, on a bi-annual basis to the Strategy partners and the public
- Deliver a detailed progress report to the Council, Strategy partners and the public on the overall Strategy, every three years
- Formally review the Strategy in five years
- Conduct in-depth evaluations of key projects and initiatives, with the results available to the Strategy partners and the public

We want the projects outlined in this Strategy to achieve real change, as well as to understand what works and what does not. In-depth evaluation will help us do this. The monitoring and evaluation framework will identify an evaluation schedule.

We have identified indicative key measures of success for the strategic themes as shown. The more detailed monitoring and evaluation framework, with final measures and targets, will be developed and released to the public. It is important to note that these measures of success will be influenced by many things outside our control (for example, economic downturns and changes in Government policy).

BUSINESS VITALITY

Improve ease of doing business
Grow the value of exports

- Business satisfaction with the DCC and business environment
- Uptake and availability of business-zoned land and property
- Percentage of Dunedin businesses who export and value of exports

ALLIANCES FOR INNOVATION

Improve the linkages between industry and research
Increase scale in innovative and tradeable sectors

- Business expenditure on R&D
- Employment in knowledge intensive and high tech industries
- Number of business collaborations
- Number of industry-research collaborations

A HUB FOR SKILLS AND TALENT

Increased retention of graduates
Build the skills base
Grow migrant numbers

- Graduate retention rate
- Qualifications of residents
- Percentage of New Zealand's migrants

LINKAGES BEYOND OUR BORDERS

Increased international investment
Strategic projects with other cities

- Number and value of foreign investment projects
- Increased linkages with diaspora

COMPELLING DESTINATION

Enhanced city centre and environs
Increased value from tourism and events
Improved understanding of Dunedin's value proposition

- Value of export education
- Length of visitor stay
- Visitor expenditure

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APPENDIX 1:

Background information on the 10-year vision and goals

Goals recap:

10,000 extra jobs over 10 years. This will require employment growth of close to 2% per annum.

An extra \$10,000 income on average for each person. This will require GDP per capita to rise by about 2.5% per annum.

The goals were based on historic performance, with some stretch. BERL tested the goals as shown below.

BUSINESS AS USUAL
(using 10-year historic performance)

	2001	2006	2011	2016	2021	% per annum change	required value change
Resident population							
Dunedin City	114,341	118,683	122,298	126,482	130,809	0.68%	8,511
New Zealand	3,737,277	4,027,947	4,241,126	4,517,978	4,812,902	1.27%	571,776
Value Added GDP (2011\$b)							
Dunedin City	3,994	4,810	4,785	5,237	5,732,	1.82%	947,
New Zealand	154,879	188,171	194,277	217,588	243,696,	2.29%	49,419
GDP per capita 2011\$							
Dunedin City	34,936	40,536	39,128	41,408	43,822	1.14%	4,694
New Zealand	41,442	46,716	45,808	48,160	50,634	1.01%	4,826
Employment (FTEs)							
Dunedin City	46,771	52,803	52,264	55,248	58,403	1.12%	6,139
New Zealand	1,539,917	1,794,183	1,860,767	2,045,452	2,248,468	1.91%	387,701
Productivity (GDP per FTE employed 2011\$)							
Dunedin City	85,409	91,112	91,559	94,798	98,151	0.70%	6,593
New Zealand	100,577	104,879	104,407	106,377	108,383	0.37%	3,976

DUNEDIN ECONOMIC DEVELOPMENT STRATEGY GOALS

(% per annum goals, ie 2.5% GDP per capita growth and 2.0% employment growth)

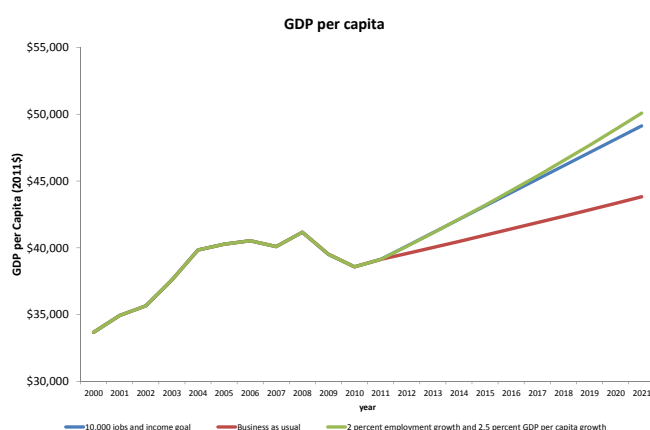
	2001	2006	2011	2016	2021	required % per annum change	required value change
GDP per capita 2011\$							
Dunedin City	34,936	40,536	39,128	44,269	50,087	2.50%	10,959
New Zealand	41,442	46,716	45,808	48,160	50,634	1.01%	4,826
Employment (FTEs)							
Dunedin City	46,771	52,803	52,264	57,704	63,710	2.00%	11,446
New Zealand	1,539,917	1,794,183	1,860,767	2,045,452	2,248,468	1.91%	387,701
Productivity (GDP per FTE employed 2011\$)							
Dunedin City	85,409	91,112	91,559	97,035	102,838	1.17%	11,279
New Zealand	100,577	104,879	104,407	106,377	108,383	0.37%	3,976

DUNEDIN ECONOMIC DEVELOPMENT STRATEGY

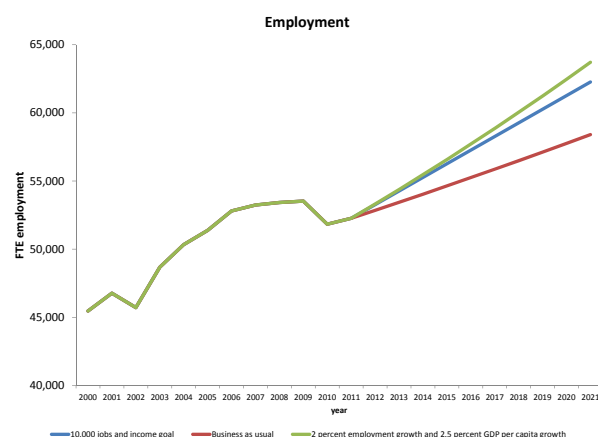
(value changes, i.e., an average extra \$10,000 income per person, and 10,000 extra jobs over 10 years)

	2001	2006	2011	2016	2021	required % per annum change	required value change
GDP per capita 2011\$							
Dunedin City	34,936	40,536	39,128	44,128	49,128	2.30%	10,000
New Zealand	41,442	46,716	45,808	48,221	50,634	1.01%	4,826
Employment (FTEs)							
Dunedin City	46,771	52,803	52,264	57,264	62,264	1.77%	10,000
New Zealand	1,539,917	1,794,183	1,860,767	2,054,617	2,248,468	1.91%	387,701
Productivity (GDP per FTE employed 2011\$)							
Dunedin City	85,409	91,112	91,559	97,522	103,211	1.21%	11,652
New Zealand	100,577	104,879	104,407	106,035	108,383	0.37%	3,976

The following graphs show the difference between business as usual and the Economic Development Strategy goals.



Source: BERL calculations



Source: BERL calculations







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www.dunedinconomy.co.nz

ATTACHMENT 3

Dunedin, our vision our future.

If there were any doubts about the Dunedin community getting behind our bid for Gigatown, they were laid to rest on the morning of Tuesday 11th of November. As the Social Media competition tightened in the final morning of the campaign, the entire city responded – 235,000 Facebook comments, 135,000 Tweets. The community had taken ownership. It confirmed a community-wide shift in the vision of what our City could be, and the role the Gig will play in that future.

Dunedin's vision is to be recognised as one of the world's great small cities, renowned as a confident, competitive knowledge centre; a community where enterprise and creativity support a productive and sustainable city. Ironically, the Gig's single most important contribution won't come from the infrastructure itself, but from an enhanced collective understanding of what the future holds, a shift in attitude, and a refocusing of our city's perception of itself.

We will build on an existing innovative environment, where generations of Dunedinites have tackled big problems

and won. Digital connectivity is already supporting our newest generation of innovators - eg Fisher & Paykel may have closed its manufacturing plant here in Dunedin, but it is now investing significantly in its design and technology division. Scott Technology and Silver Fern Farms are building smart robotic meat chains in place of the old freezing works. Revamped Gold Rush-era warehouses are being reclaimed by an expanding technology sector. Disruptive thinking has been required for many businesses to survive - this is the norm; it is not a revolution it is an evolution.

Progress in this new Dunedin will come from engaged citizens, institutions and businesses who understand the changing nature of the way we communicate, interact, and socialise. We've seen how these 'thought leaders', when nurtured, leverage their digital literacy to find new and innovative ways to contribute to their communities, do business, and lead positive social change. Dunedin already has businesses and institutions where this thinking is second nature. They are not only committed to the City, they have grasped the new opportunities that technology has provided them.

01 Describe what outcomes you're seeking for your town from gigabit services and how you will measure success.

OUTCOME 1: CREATE AN ENVIRONMENT WHERE CHALLENGING THE NORM IS THE NORM

Where our entrepreneurs, young and old, are empowered by a cultural shift that is supported by an infrastructure that enables it; our citizens and community are supported to reach their full creative collaborative potential in cutting edge ways; and our existing businesses and institutions - Hospital, University, Medical School, City Council, Polytechnic, schools - will be able to support the development of a culture and environment that is smart and future-focused.

We will measure success by developing and implementing cultural index surveys.

OUTCOME 2: CREATING HIGH-VALUE JOBS

Creating high-value jobs is at the heart of the Plan; a strong economy is the base for everything we want to do.

Our Gigatown Plan will empower existing smart companies to create those jobs - ; Fisher & Paykel Design, Scott Technology, ADInstruments, Escea and Animation Research, to name just a few. The Plan builds on the reputation they have already created as world leaders in their fields, to attract more like-minded entrepreneurs and innovators, such as Chad Hurley of YouTube, and Kiwi innovators such as Education Perfect, CloudCannon, and PocketSmith.

The measure of success will be an increase in the City's median income.

OUTCOME 3: ENSURE THE PLAN ADAPTS TO THE NEEDS OF THE WHOLE COMMUNITY

North Dunedin has the highest take up of Ultra Fast Broadband in the country. South Dunedin has the lowest, yet they are less than eight kilometres apart. The Gig will close that digital divide, accelerating initiatives that are already in place to expand access to education, supporting social development

agencies and enhancing participation in decision-making.

The measure of success will be increasing the uptake of Ultra Fast Broadband, and social engagement.

OUTCOME 4: EXTEND THE PLAN BEYOND OUR CITY

This is our opportunity to demonstrate to the country how the Gig can revitalise the provinces. We will meet with the Gigatown teams from Wanaka and Timaru to explore ways we can demonstrate the Gig's collaborative power. They understand the opportunities that it can provide their communities. There is a willingness to collaborate, as we demonstrated through the Digital Office leading the development of regional digital strategies in Otago and Canterbury. Our task will be to engage and share our experience for the greater good.

Success will be measured by working collaboratively, with initiatives trialled in Dunedin adopted elsewhere.

Who will be critical to the success of your plan?

Maintaining the incredible level of passion and engagement from the entire Dunedin community will be critical to the success of our plan.

BUSINESS COMMITMENT

"Gigatown has brought the Dunedin business community together; sharing ideas about Dunedin's future and what could be achieved with the Gig. Our businesses have always been highly adaptive and innovative. To us geography is no barrier; we operate from the bottom of the world. This attitude is critical to our success and will allow us to fully leverage the Gig."

Sarah Simmers,
Partner, Anderson Lloyd

SOCIAL AND WELFARE COMMITMENT

"Gigatown would provide substantial educational, environmental, and health benefits. Access to technology, and the training to utilise it is a key way we can bridge deprivation and social inequality. Gigatown will allow us to focus on the increasingly critical second digital divide which is how our young people use technology to improve their learning and educational outcomes."

Barbara Payton,
Otago Youth Wellness Trust

DUNEDIN CITY COUNCIL COMMITMENT

"I can't think of another single thing that would make as big a difference to the Dunedin economy as winning Gigatown."

Dr. Sue Bidrose, Chief Executive Officer, Dunedin City Council

TERTIARY INSTITUTION COMMITMENT

"The implications of winning this competition are immeasurable for this city. Without a doubt, having the fastest internet speed in the Southern Hemisphere will make Dunedin an attractive place for business. It will also provide a whole new selling point when promoting our city on the national and global stage. Imagine the new innovation that will be possible, the doors that will open up for creative collaboration the likes of which we've never seen before."

Prof. Harlene Hayne,
Vice-Chancellor, University of Otago.

YOUTH COMMITMENT

"Our young people have led the Social Media drive of this campaign, a campaign which has given them a voice and a real sense of involvement in the future of their city. The city's schools have been united in their support of the campaign - they totally get what this means."

Michael Trillo, High School Student

NGĀI TAHU

"The gig will facilitate whakawhanaungatanga, 'sense of belonging', enhanced connectedness and well-being of future generations with greater, better, more reliable connections. It presents increased opportunities to connect, with whānau living away from their papakainga/communities."

Dr Emma Wyeth,
Ngāi Tahu, Māori Health Lecturer

What governance will you put in place to keep your plan on track and leverage the gig?

GOVERNANCE

We have a proven governance structure to oversee and drive our Plan for Gig Success and its implementation targets. The Digital Community Trust (2011), a charitable Trust, independent of the Dunedin City Council, has been operating successfully in Dunedin for three years. While it is important for our City Council to be a significant part of the process, the Trust is agile and nimble, seizing opportunities as they present themselves and adapting our digital projects to achieve the best outcomes for our City.

"The Council has supported the Digital Community Trust to deliver the City's Digital Strategy; they and the Digital Office have excelled. I am fully supportive of the Trust as perfectly suited to govern this Plan, and make Gigatown Dunedin a reality."

Dave Cull, Dunedin Mayor

LEADERSHIP

The Digital Community Trust will lead the governance of Gigatown and has proved invaluable in co-ordinating our bid. It will be accountable to the community, and its decisions will be transparent to stakeholders, the wider community, and other cities throughout NZ (see appendix for trustees of the Trust).

ADVISORY BOARD

The Gigatown Advisory Board (see appendix for membership) will specifically focus on Gigatown projects and will have unfettered access to key organisations across the City. This group will evolve as the needs and projects become more real. All our supporters and community groups will have the opportunity to have a voice in activities and projects.

We will invite Chorus and Alcatel-Lucent to join the Advisory Board.

IMPLEMENTATION

Digital Office Limited ("the Digital Office") has been the operational / commercial arm of the Digital Community Trust. The Digital Office was purposely created by the Trust to undertake projects and deliver outputs. It will co-ordinate input from community and business leaders to source ideas and implement projects outlined in this Plan. It has a proven track record of successful digital project implementation for the past three years, e.g. the Digital Office was one of the first to deliver community internet access from a school in a low socioeconomic area, and it developed a world-first online digital assessment to help businesses maximise the use of the internet; a service that has helped over 850 businesses.

The Digital Office has a permanent presence in Dunedin and is not only delivering the city's Digital Strategy, but also the Otago Regional Digital Strategy. The Office is highly regarded nationwide. It has a contracted-for-purpose team and it is ready to coordinate and deliver the Plan.

Peter Hills	Mike Collins	Mike Harte	Paulette	John Gallaher	Sarah Simmers
<i>Chair</i>	<i>Trustee</i>	<i>Trustee</i>	Tamati-Elliffe	<i>Trustee</i>	<i>Trustee</i>
Logan Park High School	Otago Polytechnic	University of Otago	<i>Trustee</i> Ngāi Tahu	Forsyth Barr	Anderson Lloyd



Ian Taylor	Mike Horne	Jacobi	Jason Leong	Laura Black	Sam Mann
CEO	Partner	Kohu-Morris	Founder	CEO	Professor
Animation	Deloitte	High School	PocketSmith	Methodist	Otago
Research		Student		Mission	Polytechnic



Ngāi Tahu	Otago Community Trust	Secondary Schools Principals Association	Primary Schools Principals Association	Chorus	Alcatel-Lucent
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Josh Jenkins, Stuart Dillon-Roberts, Andee Gale and Nick Adamson.

Grow Dunedin Partnership and Dunedin City Council (including Enterprise Dunedin.)



This tag cloud demonstrates the community support in the final few weeks of our Gigatown campaign comprised of 235,684 tweets from many supporters.



02

How will you use the gig to create a smart city?

OUR FIRST STEP

We held Dunedin's first Smart City Summit in September. It brought together a Smart City expert with thought-leaders from across the City to explore what a smart city might look like, and what would be needed to take advantage of gigabit services to drive smart city innovation. There was standing room only at the event.

SMART CITY FRAMEWORK - OUR PLAN FOR THE FUTURE

We will create a smart city framework for Dunedin. It will be a framework that brings our community together, and allows a mixture of top-down and bottom-up approaches, coupled with public / private partnerships and social enterprise.

Our framework will focus on the gig and technology to support innovation - it will put people at the centre. We will identify the intersection of the people and the technology, then encourage immigration and involvement of creative types in urban planning.

"Chattanooga's first gig app - a smart power grid - saves the city \$10.5 million pa. The Gig will create new rules, different ways of utilising data and the Internet of Things. We'll see new businesses that collaborate on re-engineering and rethinking how smart technology changes New Zealand's economy."

Josh Jenkins,
Digital Office

What's the opportunity for, and role of, public facilities and services in your gig plan?

PUBLIC INFRASTRUCTURE

Smart technologies running on the Gig will reinvent how we engage with public services and facilities. Sensors connected to a City-wide fibre infrastructure would produce large amounts of information, assisting in accurate data-driven decisions.

The opportunities surrounding the Internet of Things (IoT) hooked up to fibre will allow us to make improvements to our transport, roading, energy, water, air, and waste infrastructure.

For example, the City Council's new Energy Plan could improve energy use by providing accessible, real-time tracking and by leveraging the planned upgrade of the city's street lighting to LED. In addition to feeding off the street lighting posts, connected security cameras would improve safety for students, and civil defence sensors would provide early warnings.

ENGAGEMENT, ACCESSIBILITY AND CULTURE

Dunedin has renowned Museums and Art Galleries. However our geographic location impedes absolute ease of access and engagement with the assets and capability of these organisations. Gig infrastructure will make our collections more accessible. For example a virtual reality tour could be set to share historical heritage and artifacts of Ngāi Tahu.

HEALTH AND MEDICINE

Our District Health Board (DHB) led the nation with the roll-out of electronic prescribing, and our Oncology Unit was the first to have online chemo prescription and online sorting of radiation treatments. But with paper-based records, fax machines and pagers the norm, and with dozens of doctors travelling around the region every day for clinics, there is scope for significantly more innovation and connectivity. Gigabit speed would be the catalyst.

"The Southern DHB covers the largest geographical area in NZ, and is also the most sparsely populated DHB. We have more regional hospitals than any other DHB in New Zealand. Winning this competition could enable us to communicate & collaborate better with patients & our colleagues."

Carole Heatly,
Chief Executive Officer, Southern DHB

The Gig would propel us towards a future-facing, IT-based health service. Why should a patient have to face prolonged travel or wait until a specialist travels to their infrequent clinic? Medical monitors could be viewed remotely and there could be virtual bed-side consultations any day of the week. Facetime could replace phone conferences between medical professionals.

In five years technology has changed the way we practice, with smartphones used more than stethoscopes. In five years, the Gig will have changed the way we work again.

How will you use the gig to foster digital accessibility and inclusion and ensure everyone in your community has opportunities to benefit from gigabit capability?

We want our community to lead our Gigatown journey; to be excited and have their say, and to see the Plan in action.

OUR LIVING CITY HUB

Our Living City will be a digital hub, a physical location for dialogue around our Gigatown Plan. It will be a place that is informative, educational and inspiring, showcasing what we have achieved, explaining what we are currently doing and what we have planned. We envisage this being in the heart of Dunedin, visual by nature and drawing upon the talent we have in our city.

DIGITAL INCLUSION AND EQUITY OF ACCESS

Critical to the transformation of Dunedin into a truly smart city (and a national figurehead for the power of the Gig) is widespread engagement across all sectors of the community regardless of age, stage, and financial capability - equity of access is fundamental to success. This starts with schools. We have approached the Otago Community Trust and other potential grant funders and stakeholders (Ministry of Education, Education New Zealand) for their support in ensuring that we have the appropriate network and computer infrastructure available,

and skilled, trained human resource to ensure our young people can really leverage Gig capability.

“Dunedin has some of the worst Māori language statistics in the country. For local Kāi Tahu, intergenerational transmission of te reo hasn’t occurred in our region for over 100 years, up to five generations for some families. We currently have a handful of families who have committed to acquiring the level of fluency needed to raise their tamariki with te reo as the first language in the home, the first time we have had tamariki speaking te reo as a normal everyday living language with their parents in over 100 years. We need all the assistance we can get to continue to grow te reo in our town.”

Paulette Tamati-Elliffe,
Māori language revitalisation
programme leader, Ngāi Tahu

Mana whenua are committed to this Plan. Ngāi Tahu has a young, technologically savvy population; over half are aged under 30. Ngāi Tahu and local runanga are taking pivotal roles in governance and planning, and are focused on ensuring not only fibre infrastructure to their people, but on initiatives to leverage the Gig eg enhancing language revitalisation, cultural mapping and archival record work.

Dunedin isn’t without problems around poverty, inequality and youth unemployment. We fully understand that there is a digital divide with members of our community who lack digital skills and access. Our median income is below the national average, and suburbs such as South Dunedin have internet access at half the national average. We want to address equity by creating a connected collaborative network of people.

Our solutions to address the digital divide are explained in the Education section.

How will you encourage collaboration around the gig to leverage smart town opportunities?

DIGITAL DUNEDIN DASHBOARD

We will have a city-wide mechanism by which all our local data can be stored, tracked and displayed. It will be contributed to, extended and consumed by residents. It will align with government open data trends and leverage infrastructure, systems and processes that already exist. Interfaces will be developed for:

- public information (flight, parking and traffic information, road closures, bus locations)
- university schedules (timetables, public lectures)
- entertainment (ticket sales at local venues, menus, specials at local restaurants)
- broadband metrics by ISPs (throughput, data downloaded, numbers connected)

- stats from private companies (number of customers/employees)
- projects by individuals and students (community statistics, streaming media, etc)

New initiatives, both public and private, are encouraged to send data into the dashboard, and statistics are collected and shared. The sharing of data across multiple public service organisations, including social services, will enable us to – for the first time ever in any New Zealand community – a snapshot of our people, and map resource allocation, in real-time. We imagine users being able to access live video feeds, crowd stats, offers, historical guides, tour information and more.

This approach becomes the common platform that informs and involves all residents; they can choose what to display on their devices, and overall

the dashboard becomes the pulse of the City’s network. The dashboard will present real-time information for the general public about how Dunedin breathes, and has changed over time. The services developed from this data will be used to create information displayed in Our Living City Hub.

“The real benefits of smart cities come not from technology and collecting data, but the value-added services and apps that are built on top of, and enabled by it. We can’t predict what new apps, websites or services will be created using this data, but what we can do is encourage collaboration and leverage opportunities for innovation. This evolves from the bottom up, with life-hackers, developers and disruptive thinkers.”

Jason Leong, PocketSmith

GOAL

Smart City Plans

Inspire and prepare our future plans

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Run a Dunedin Smart City Summit	Education and awareness of smart city opportunities, brainstorm initiatives and prioritise next steps	Completed	Digital Community Trust	Complete
Create a Smart City Framework	An underpinning plan on how we will become a smart city including a simple, clear vision for our city based around the Gig.	Prepared by April 2015 and reviewed annually	Gigatown Advisory Board, Digital Office and seek support from Dunedin City Council	Planning

GOAL

Smart City Projects

Initiatives that embrace smart city thinking and the Internet of Things.

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Build Our Living City Hub	Residents educated about the importance of becoming a smart city and what's happening through a physical hub that displays infographic information about Dunedin's IoT projects.	Draft designs presented by April 2015	Digital Office, Gigatown Advisory Board and seek support from Grow Dunedin Partnership	Initial Conversations Started
Develop and launch the Gigatown Dunedin Dashboard	An open source repository of all Dunedin's smart city data, along with other public data, will be made available to all. Developers start utilising the open source data and create apps and websites for wider community benefits.	Operating August 2015	Digital Office and seek support from community	Not Started
	Growth, sustainability, innovation and social connectedness are measured every 6 months to inform next steps of implementation	6 monthly online surveys		
Intelligent city cloud platform is created	5 IoT pilots within the city to help improve interaction between user and public institutions leading to increases in efficiency and opportunity. Resources, processes, utilities platforms, systems and infrastructure are continuously reviewed.	- reduction in per capita energy use - productivity increase - decreased crime - new applications - public satisfaction surveys	Digital Office in conjunction with Dunedin City Council	Not Started

03

How will you leverage the gig to stimulate economic development in your town?

Ultra-fast broadband and gigabit services will provide a platform for economic growth.

ECONOMIC DEVELOPMENT STRATEGY - WE WILL ALIGN OUR WORK TO THIS STRATEGY

Dunedin has developed a highly successful, and well regarded Economic Development Strategy, publically praised by Economic Development Minister Steven Joyce as one of the best in the country due to real and widespread city collaboration. This Plan for Success is strongly aligned to its strategic themes.

"Gigabit Internet is not a technology to be managed or controlled. We understand that the businesses and people who will take advantage of the Gig don't actually need us, but they do need a city that understands what it means to be innovative and doesn't stand in the way."

John Gallaher, Chair, Gigatown Steering Team

We will leverage the global opportunities already identified by companies such as ADInstruments, Timely, Education Perfect, and Animation Research. The Gig enables a level of collaboration, across town and around the world, that is unprecedented. Our future lies in leveraging businesses that are already on this digital highway, together with fostering the young innovators who are creating the companies of the future that will bring the high-value jobs that are at the core of our Plan.

BUSINESSES GROWTH - WE WILL EXTEND OUR CURRENT PROGRAMMES TO GROW BUSINESSES IN DUNEDIN

Dunedin's Digital Ambassadors programme has been operating for three years with hundreds of donated hours of time to help businesses come to grips with technology. We will increase our commitment and expand our Digital Enablement Training, a programme endorsed by the Ministry of Businesses, Innovation and Employment, to help businesses understand technology and maximise the opportunity.

GROWING OUR STARTUP ECOSYSTEM

Every year, 25,000 young, innovative minds walk our streets as students of University of Otago and Otago Polytechnic. A startup ecosystem based around being Gigatown will help retain these bright young minds in the city, and also attract new talent.

Audacious - a startup competition for students - coupled with the StartUp Space, already allow students of any vocation to collaborate and create ideas. An ambitious individual in medical school might meet an IT student, a developer, and a designer all in the same space. Together, they could create powerful tools for the health industry.

Co.Starters - a startup accelerator

We will establish co.starters, a startup accelerator that turns business ideas into action. The model supports economic gardening - creativity drives innovation, innovation drives entrepreneurship, and entrepreneurship drives sustained economic growth.

Gig Challenge - inspiring gigabit projects

The Gig Challenge will be our annual Gigatown flagship startup event, with the aim of producing services and application that maximise the gig.

We will attract entrepreneurs to push boundaries and innovate on our gigabit network. Participants will be challenged to develop technology or online services around themes that utilise gigabit Internet for the benefit of the wider community, supported by our city experts, industry specialists and business development resources. The prize will be seed funding through sponsors to take their ideas forward.

Giving innovation a home

A startup incubator will be fully investigated to determine whether it is an appropriate environment and concept.

The project would offer: shared spaces, a gigabit connection, access to administration support, access to tools (computers, 3D printers, video center, etc), and business mentoring support services. Short-term co-working spaces would further enhance a startup incubator community that collaborates and feeds off each other.

What kind of companies and entrepreneurs will you seek to attract to your city and why?

WHY?

This competition has seen a shift in our community's perception of itself. There has been a city-wide awakening to the attributes, both physical and intellectual, that already exist here. We recognise that we have what it takes to shape a new future, which will be based around the access that the Gig will give to a global market-place.

"There are two game changers. Firstly the Internet meant I could think beyond a small local market when I set up Timely. My market was global from day one. We now have clients in 1700 cities around the world in less than two years. The speed to market is huge. The second is I can employ the best people in the world. We have staff working collaboratively in 3 countries around the world. That is the Power of the Gig. That is the future of Dunedin."

Ryan Baker, founder of Timely

WHAT KIND OF COMPANIES AND ENTREPRENEURS?

This question pre-supposes a need for a physical presence when the true power of the Gig is the ability to collaborate

across borders and to partner with organisations that will help us grow our businesses at home.

"We are designing our future around partnerships with companies and people around the world that share our ideals and values. Some of those companies are large, IBM, NVidia, Oculus Rift/ Facebook but most are small, agile, disruptive and nimble. What we expect is that, together, we will create the kind of high-value jobs that lie at the heart of any economy, especially one that will build its brand around being the country's first Gigatown."

Ian Taylor CEO of Animation Research

Ultimately our success will be measured by the number of companies and entrepreneurs attracted to Dunedin, not always as a physical destination, but by a culture of innovation and collaboration that benefits all parties.

In his book "Remote" Jason Fried put Dunedin in his world top ten city hot spots for talent. YouTube Co-founder Chad Hurley has collaborated with local developers to establish a new startup that he believes will change the way people make videos for Social Media.

Ex Fox Executive David Haslingden invested in NHNZ and created a global children's television channel that relies totally on the web for production and distribution. Animation Research Ltd is collaborating with Austrian-based Spider-cam, Swiss based Pro Tracer and South African-based Flightscope to develop the latest in augmented reality sports graphics for clients in the US, Europe, UK and Australia.

Highly skilled ex-pats will be attracted home.

"I left Dunedin 18 years ago and for the last 11 I have worked for Pfizer, first in Australia and most recently in London. I came home to take up the position of CMO at ADI. I didn't even know the company existed in Dunedin and I have been amazed at some of the companies I have come across since getting back. It's truly world class."

Julie Curphey, Chief Marketing officer ADInstruments

This is the world that we have already embraced in Dunedin. It is not something that we have to start from scratch; it is something that the Gig will help us accelerate and exploit.

How will you help these types of companies and entrepreneurs flourish?

The first step is to demonstrate to these companies and entrepreneurs that we are totally serious about creating a World Class Small City driven by the Power of the Gig.

In the first three years we will focus on projects that are real and deliverable, to provide concrete examples of the Gig at work.

Developing an R&D Centre of Excellence and Innovation for sport, fitness, health and well-being in Forsyth Barr Stadium would be an outstanding, high profile example of how the Gig can take a magnificent sports facility and turn it into a City asset acclaimed by all. An initial R&D project at the Stadium,

funded by two Dunedin businesses, Enterprise Dunedin, Otago Polytechnic and the University set a benchmark for how this can be achieved. That trial resulted in contracts worth just over \$2million.

Such a Centre of Excellence appears to fit perfectly with the Government's Science and Innovation priorities. Our businesses with globally recognised strengths and real commercial opportunities, combined with our tertiary institutions, creating a specialist Innovation and Incubation Hub. That Hub will be a catalyst that helps bring the vision together and demonstrates to our companies and entrepreneurs that the vision is real and achievable. The Gig

would enable and accelerate the world class collaboration that is already being undertaken.

"NHNZ has been able to remain an active member of the Dunedin business community because of the availability of high speed data, putting down deep roots in the City of its birth while working closely with clients and partners the world over. In an age when near instant communication and information delivery is prerequisite to business survival, high speed data is as important as electricity and water."

Wayne Poll, Technical & IT Systems Manager, NHNZ.

How will you promote and market the benefits of the gig to attract businesses and people with the skills to activate the benefits of the gig?

Dunedin will become widely known as Gigatown. Our storytelling techniques will highlight Gig successes and our lifestyle - the benefits, and positive outcomes, of living and working in Dunedin. Social media, online marketing, PR and print media will be used to distribute our stories to targeted businesses and individuals, and we will share our stories regularly. Dunedin will own the brand that is Gigatown. We will work with Enterprise Dunedin, the agency responsible for the economic development and marketing of the city, and Research published by the University of Otago on Gig success, community or commercial, will be shared on a world stage. Refer to Gig Club for further marketing details.

GOAL

Stimulating Economic Growth

Supporting businesses to maximise the use of gigabit Internet

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Digital Ambassadors programme extended to provide advice on how businesses can maximise gigabit Internet.	Tailored action plan and mentoring available to help Dunedin businesses maximise their use of Gigabit Internet, and operate globally.	400 hours of business advice and mentoring, per year.	Digital Office	Underway, an extension of a current programme
Digital Enablement Training with a focus on maximising the use of gig Internet.	Dunedin businesses understand the opportunity around the gig and maximise the opportunity.	Target of 10 courses per annum, with 2 of these in Otago.	Digital Office	Not Started
R&D laboratory to be established in the City	Testing of services, device incubator, alignment with current R&D programmes	Initial plan established by August 2015	Digital Office and seek support from University of Otago/Otago Polytechnic and Grow Dunedin Partnership	Not Started

GOAL

Innovation Ecosystem

Support entrepreneurs, small businesses and startups to innovate and drive economic development within our city

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Co - Starters Implement the Co-Starters accelerator model <i>Adopted from CoLab in Chattanooga</i>	A growing startup community where those involved support each other, resulting in more businesses and jobs created in Dunedin.	Programme operating by June 2015 with 30 startups through by December 2015	Digital Office and seek support from Grow Dunedin Partnership	Pilot programme operating
Investigate the concept of a startup incubator to support new startups and entrepreneurs	Encourages startups to stay in Dunedin, helping grow the economy and create high-value jobs.	Feasibility study is completed	Digital Office and seek support from Grow Dunedin Partnership	Planning
Gig Challenge Host annual Gig Challenge competition	Create business startups and ideas that utilise, and innovate on, gigabit infrastructure.	Annual competition in Nov/Dec/Jan/Feb	Digital Office and seek support Grow Dunedin Partnership	Not Started
Create-IT Expand the Create IT pilot	Community problems or needs solved with smart services/apps developed through collaboration for social good.	2 events annually, with 2 community based development projects resulting from each	Digital Office and seek support from Grow Dunedin Partnership	Extending current pilot



Our Gigatown campaign has attracted significant funding and investment to date; in excess of \$500,000 in cash and in-kind contributions. We've been humbled by the number of volunteers who have donated their time, and the many, many Dunedin businesses who have contributed financially and in-kind during this Gigatown competition. Large financial contributions have come from a range of local organisations and businesses including the University of Otago, Otago Polytechnic, Silver Fern Farms, OCTA Associates, Animation Research and the Dunedin City Council.

What's your plan for attracting investment and funding for the tactics in your plan?

Investment and funding has many different components and we have a multi-faceted approach which supports the diverse strands of our engagement with the Gig.

INVESTMENT FUNDING

Dunedin has an active angel and seed investment programme. These investors are unashamedly parochial and proud of Dunedin. There are also strong connections with the Southern Lakes District of New Zealand via an established angel investment network, which has a number of wealthy NZ and ex-pat investors looking for 'local' opportunities in the high-growth space.

There is an existing IP commercialisation structure through the University of Otago's commercialisation engine (Otago Innovation Ltd), and strong local representation and links with the Powerhouse incubator / accelerator. In addition we have Otago Pre-Angel Limited (OPAL) - an investment body that supports Dunedin businesses through mentoring and investment.

Project Shanghai stems from the creation of the Dunedin Economic Development Strategy, in which the sister city bond with Shanghai is identified as a strong platform for building trade and investment relationships with China's financial capital. Already it is providing investment opportunities for us in the commercial and academic environments. The addition of the Gig,

and the opportunities surrounding it will only enhance this.

The building blocks are in place; overlaying the Gig accelerates opportunities so we can push through existing pipelines. Past experience confirms the value of momentum and a variety of potential opportunities.

"Good ideas will always attract the money. The Gig, in conjunction with Intellectual Property generated from the University of Otago and Otago Polytechnic, is an ideal environment to create more ideas for potential investment into Dunedin."

Sir Eion Edgar,
Chairman, Forsyth Barr

RESEARCH AND SUPPORT FUNDING

Dunedin is already a standout in generating research, business growth and development funding. High value investment revolves around IP - Dunedin is a leader in this arena. In 2013 alone the University of Otago generated \$140 million in government and external research funding (including from leading global benefactors such as the Bill & Melinda Gates Foundation). Otago Polytechnic generated a further \$3.5m in its innovation development grants.

This again highlights that Dunedin has proven and well-established funding channels in place. Overlaying the Gig allows us to amplify the opportunities to seek additional funding through these channels.

COMMUNITY FUNDING

Dunedin understands the importance of community funding. Unique to Dunedin, the Digital Office has been funded for three years by external investment from local government, institutions, trusts and investment from Internet NZ, Google, Callaghan Innovation and Chorus.

Our City Council has already committed to digital leadership in the City, including subsidised digital enablement training courses for Dunedin businesses during the Gigatown campaign. The Grow Dunedin Partnership has also committed funding to deliver the Dunedin Digital Strategy.

The Otago Community Trust (OCT) is a key stakeholder to our plan and committed to funding accessibility and education opportunities.

There is also potential for more economic investment from Ngāi Tahu in Dunedin and Otago when we get the Gig. Ngāi Tahu is forward thinking and constantly scanning the horizon for new opportunities and technology to further benefit its current and future generations.

Our tactics are clear - leverage existing funding models that are working today, utilise the contestable funds available in the City and maximise our connections. These connections include: utilising Otago relationships, alumni, sister cities (Shanghai and Edinburgh) and national funding entities.

What public/private partnerships would you aim to establish as part of your plan?

We have a strong public/private partnership ecosystem in place through city institutions that have been supporting the Digital Office and the Gigatown campaign. This model has been refined and is part of our Plan for Success, which covers:

- *University/Polytechnic - investment into research and development and supporting startup businesses*
- *Otago Community Trust - a strong supporter of the Digital Community Trust and work in social and community projects*
- *Grow Dunedin Partnership - which has invested in projects with economic benefits to the City*
- *External investment - including partnerships with NZ Venture Investment Fund, Callaghan and NZTE.*

We have started a discussion with the OCT about potential funding for delivering aspects of this Plan.

“To date, Otago Community Trust has contributed nearly \$10M towards technology in primary and secondary schools across Otago. The Trust has maintained this commitment to enhance and support information technology provision to the wider Otago Community. With an annual donations budget of between \$4 - \$6M the Trust is a well resourced and well regarded funding partner in Otago and remains extremely committed to building on our previous initiatives in this area.”

Lauren Semple, Chair, Otago Community Trust

CROWDFUNDING

Crowdfunding has been successful in Dunedin, and in particular funding initiatives in our Arts and Culture sector. The Dunedin Street Art group recently asked the local community, through a kickstarter campaign, to help bring world-renowned street artists to town for a street art festival. The response was overwhelming, with over \$10,000 raised to help the initiative in only a few weeks.

We want the City to get behind our plan and crowdfunding is one way to galvanise the people. We have kicked off a crowdfunding initiative as part of our Gigatown submission. Immediately after winning Gigatown we will have a crowdsourcing initiative operating, to demonstrate commitment from businesses, city leaders, investors and mums and dads. Dollar by dollar we will show full community support.

SOCIAL ENTERPRISE

Leading social enterprise in Dunedin, Thankyou Payroll, provides free payroll services to charities and SMEs around New Zealand. It offers cost-free, cloud based payroll intermediary services and donates 25 cents per person, per pay to community organisations.

These models have worked and have offered us other tactics to seek investment. During our Gigatown Campaign, Showboat, a Dunedin animation business, produced a video on Gigatown. Businesses paid for this animation with a percentage of the profits going towards our campaign funds. This model has worked and offers us another tactic to seek investment.

MORE THAN JUST MONEY

This is about more than dollars. Connections and collaboration will open doors to new investment. We have one of the largest Alumni Networks in NZ (90,000 alumni in over 140 countries) through the University of Otago, and well regarded business leaders, international relationships and world-renowned researchers.

In an unprecedented demonstration of support, businesses across the city freed up staff on the final morning of the competition to help our bid. Support had grown steadily. A series of 14 full page advertisements was funded by the business community in less than two hours.

Our Sister City relationship with Shanghai resulted in the only authentic Chinese Garden in NZ, which signifies strong ties - these relationships, partnerships, connections will open new doors and opportunities for investment. These relationships are providing exchange and learning opportunities for students in our colleges. We see this as an important component in investing in our childrens' future.

What support will your town provide to the winner/s of the NG Connect joint development fund?

We understand the ng Connect Gig-Start Fund winners will want to use gigabit services to innovate and push boundaries. We envisage a partnership between us and the winning companies and Alcatel-Lucent's ng Connect, leveraging the skills we have in this City and those from the ng Connect ecosystem.

Our support to maximise the opportunity for success will be through:

- *attracting to Dunedin, entrepreneurs and global leaders in next generation ideas to develop and innovate new applications and services that maximise the Gig internet (refer to Innovation Ecosystem category - Gig Challenge). The winning solution*

will have access to the seed funding and advice.

- *providing an rent free residency and environment that helps overcome barriers to success (refer to Innovation Ecosystem category - Startup Incubator)*
- *showcasing the ideas and success stories through marketing and branding initiatives (refer to Gig Club category - Marketing).*

GOAL

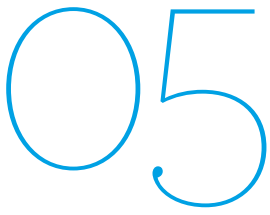
Projects outlined are well funded

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Crowdfunding from the wider community.	Grass roots level buy-in to digital initiatives outlined in this Plan	\$100k as initial target	Digital Office	Ready to go
	Run a crowdfunding initiative immediately after winning Gigatown.	5 projects @ \$20k		

GOAL

Grow funding through new and existing networks and channels

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
A mix of public/private partnerships	Ensure available funding is leveraged, current channels are expanded, and projects are appropriately funded by local and national businesses, community trusts, and central and local government.	funding plan developed by March 2015 \$1m in first year	Digital Office Seek support from local government and businesses.	Not Started
Community Projects fund	To create a pool of funding for community-based Gig projects	\$1.5m over the 3 years	Digital Office Seek support from local trusts.	Not Started
Research and Development funds	To increase the funding flowing into Dunedin business To increase the funding flowing into Dunedin tertiary institutions	10% increase per year 10% increase per year	Digital Office And Digital Community Trust	Not Started



We will provide greater connectivity to extend learning, research and development.

Dunedin is truly an education city; 25,000 tertiary students, 15,000 school students and 7,000 staff housed in high-quality facilities within a peerless natural environment. The University of Otago, Otago Polytechnic, secondary and primary schools having Gig will optimise Dunedin's status as New Zealand's pre-eminent education precinct, enhancing the symbiotic relationships between our teachers, learners, researchers and their extended communities, and providing the City with competitive advantages and marketing opportunities.

What role will education play in your plan, and how will education providers benefit from gigabit services?

BUILDING THE EDUCATIONAL NETWORK FOR THE FUTURE

Success will mean that Dunedin will become the first City in the world to have all students (tertiary and school) connected to Gig internet through a city-wide access service. Using the "Eduroam" wifi mesh application, we will enable simple, city-wide access to fast wireless for all students – school age, tertiary students, graduates and seniors. We also have an ambitious plan to get Gig into flats, homes and student hostels. Through this, every student enrolled at a Dunedin school, Otago Polytechnic, or the University will have wireless access – a first that will turn the entire City into a campus for students of all ages, and make Dunedin the most connected education network in the world.

Planning meetings have taken place between REANNZ (Research and Education Advanced Network New Zealand Ltd), University, Polytechnic, Schools, the Ministry of Education and The Network 4 Learning Ltd. All parties agree this is feasible, exciting and desirable. This will be an enabler for personal, commercial and professional benefit.

"Ours is a Decile two school and we're determined to close the digital divide because we're seeing the difference that is already making. Kids, once disengaged, are now totally engaged in learning."

Ben Sincok,
Principal, Carisbrook School

In 2002, Dunedin led the way for NZ by creating "SchoolZone", where 1,200 schools joined in the sharing of teachers and resources online. In 2010, we led the way for NZ through fibre connected cloud-based shared services for schools with various collaborators – the "Education Hub" – the forerunner to the Government's Network 4 Learning. Shared services and high quality internet access have enabled new teaching and learning pedagogies.

In 2015, Dunedin will lead the way again with Gig projects using Eduroam – it will provide educators/learners with new tools. "Southteach" Communities of Practice will be our focus – creating professional leadership and student voice groups to share these benefits. It will do this by encouraging interlinked virtual classrooms using High Definition video in blended learning environments, informing teacher training, challenging existing models of schooling using collaborative teaching models, and allowing personalised anywhere, anytime, any device differentiated learning within the context of enriching options for all learners.

New opportunities within existing institutions will be facilitated which will further enhance opportunities which will be supported and researched by the University and the findings published – promoting open access for universal benefit. Education is undergoing a transformation and Dunedin is at the forefront of this. We will be about attitude change – not awareness raising.

"Greater connectivity gives us the opportunity to rethink how we deliver education across the sector.

We can reduce duplication, increase collaboration and provide a more seamless educational experience, from primary through to tertiary years."

Phil Ker, Chief Executive,
Otago Polytechnic

Shared services and high quality internet access has allowed new teaching and learning pedagogies – virtual learning classrooms, blended learning, collaborative teaching models, a virtual school, extended communities of practise, personalised learning, teacher training pilots – in modern learning environments. All these are happening.

WIDER COMMUNITY

We also want to up-skill and engage our community in the use and knowledge of digital technology and services. Our Plan includes projects to address the digital divide in our City:

Wifi Mesh Networks – access for our community – We want to provide our wider City with access to the internet and give people the opportunity to go online and use new educational programmes. We will establish a project to have giga-hotspots throughout the City, and create corridors of giga-fast access for our residents, businesses and visitors. Of course, this will be free and the first place to be enabled will be the heart of our City, the Octagon.

The Knowledge Hub – to provide educational resources at your fingertips – We will introduce the Knowledge Hub project to make it easy for all residents to access educational resources. The Knowledge Hub is an online educational resource to inform, explain and educate our city about Gig-internet and what you can do online. It is a world-class resource to build digital skills for the future. When accessing our Eduroam or our gigabit wifi mesh, the landing page will be the Gigatown Portal, which will provide access to the Knowledge Hub.

DIGITAL TRAINING AND UPSKILLING – EXPANDING OUR PROGRAMMES IN THE COMMUNITY

Computers in Homes – parents in low decile schools are being targeted and helped with computer literacy (employability), then provided with a refurbished machine for their home providing better access to educational tools. In 2014 we piloted a BYOD scheme that provided a family with a tablet device, and we introduced a tablet recycle programme where donated devices are gifted to schools with children who cannot afford, or do not have access to, this technology. The devices are supported with training to maximise educational output – another New Zealand first. These programmes not only provide

the tools and knowledge needed for today's working environment, but also foster a knowledge economy and create digital equity. We want to create high-value jobs for our youth.

Free digital training – We will continue to engage our community and develop their skills through the provision of training utilising the successful existing digital programmes. We will focus our digital training efforts at the locations that need it most – low decile schools, lower socio-economic suburbs, elderly groups, child care groups, teachers, and health professionals.

Creating a Digital Hive – we also need to provide opportunity for youth in Dunedin. We will start a new project called Digital Hive – a programme that supports youth learning through digital technology and aligns us with a global Hive Learning Network, organised by Mozilla. It will provide resources, and access to a world-wide knowledge group of connected teachers and students. This is a programme that a growing number of established and developing learning communities in other Gig cities like Chattanooga and Kansas City are involved in. It will be a first in NZ.

Youth Space – Dunedin is already home to the only South Island HighTech Youth Network which operates from our lowest decile

school in South Dunedin. It is a model supported by Microsoft and HP that aims to empower youth and foster learning through sharing with other schools and the community. We will expand on this. A Youth Space will be permanently established in our City that is open for young people to attend and experience digital technology firsthand. The Youth Space will offer students a place to meet, share experiences and attend more formal educational programmes like Code Clubs, 3D modelling or robotics sessions. The first girls' Code Club in New Zealand is soon to be established in Dunedin and providing this opportunity in community-based facilities such as that set up at Carisbrook School will be one of our priorities. We are well advanced in our discussions over a venue for the Youth Space.

Providers will benefit through extended coverage to all sectors of these communities – opening the doors of change.

The school day may well disaggregate into a number of learning sessions, some at home, some in the neighbourhood, some in pairs, some in larger groups, with different kinds of facilitators."

Peter Hills,
Digital Community Trust Chair

What role could research institutes, polytechnics or universities play in the success of your plan?

EXTENDING DIGITAL EXCELLENCE INTO THE FUTURE

University of Otago and Otago Polytechnic students and staff play an integral part in Dunedin's innovative start-up ecosystem. Both Institutions have already taken part in the first R&D sports project carried out at Forsyth Barr Stadium, the University is partnering in a major project with ADInstruments, and the Polytechnic provided core R&D for a revolutionary hair product called Rock Foil.

They push innovation boundaries and feed start-up programmes like Audacious and innovation projects like AppStar that will take advantage of our gigabit infrastructure. Dunedin is well placed to be a globally preferred Research and Development Laboratory.

We have in place an Economic Development Strategy promoting strong links between our tertiary education providers and the City. We want to become a sandpit of creativity producing high-value jobs and opportunities to retain graduates, fuelling economic growth and cementing the city's reputation as an innovation hub.

Dunedin is already a centre of research excellence, and we will leverage this status to enhance our place on the world stage. Education Perfect, created by an undergraduate through Audacious, is an example of what is possible. This hub of activity, the progress of which will be measured by economic outcomes (increased job numbers in Dunedin) and successful project outcomes, will be a key focus area. In response to the changing world the

University's Centre For Entrepreneurship is home to entrepreneurship research and the award-winning Master of Entrepreneurship Programme.

Measuring the success of gigabit infrastructure in our City will prove to other cities that the Ggig can make a change, socially and economically. We will establish research projects, through the University of Otago, to record and measure both Research and Development and successful outcomes. The findings will be communicated directly to our stakeholders, published annually on our portal and through high-quality, internationally-recognised research publications. We want to disseminate as widely as possible what the positive outcomes can be for a city with Gig internet.

GOAL

Extending Digital Excellence

Building a world class city wide network

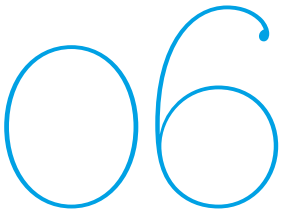
ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Implement an Eduroam citywide gigabit wifi mesh	An educational authentication and access network to simplify access for school children, students and teachers. facilitating digital inclusion and economic development.	Implemented in University/Polytechnic with 20000 students/ staff able to use, by July 2015. Able to be used by 5000 school students by December 2015	Digital Office, University of Otago, Otago Polytechnic, School Principals	Planning (initial meetings held)
Install Gig wifi corridors throughout the city centre	Free public access to fast internet that promotes an innovative urban environment for more business to take place. Plus increased access to fibre for all.	Octagon established in February 2015, 3 corridors locations from Octagon finished by July 2015	Digital Office, Telco/ISP partner	Not started
Southteach Communities of Practice	Teachers and learners can collaborate and access their community digital resources anywhere, anytime on any device.	The creation of at least 15 Communities of Practice with 500 Dunedin teachers members of at least 1 community.	Digital Office and School Principals Associations	Not started

GOAL

Digital Inclusion

Encouraging digital literacy among residents of every socioeconomic status, through community access and education

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Create Dunedin's Knowledge Hub.	An online resource for wider community (including visitors and those outside Dunedin) that provides online training material to maximise online use and access to information, access to gig-information, latest news and progress on the Plan for Success.	Launched by August 1 2015. Usage statistics increasing each month Independent assessment made on effectiveness of the service	Digital Office	Not Started
Launch Dunedin Digital Hive	Opportunity to connect with other gigabit cities around the world through youth events, learning communities and learning networks.	Launched by May 2015 Participation in 5 events by December 2015	Digital Office	Not Started
Open a Youth Space	Youth education, development and engagement that ultimately high-value jobs. Including code clubs	Launch by December 2015	Digital Office, in discussions with library	Not Started



How will you market & promote Gigatown?

STAGE 1 REBRANDING

We have leveraged Dunedin's existing brand and its power from many supporters across the world to support our Gigatown campaign. Now our City brand must reflect Gigatown. The gig message needs to be woven into the existing City brand exploiting the business, community and social opportunities.

STAGE 2 GIGATOWN CAMPAIGN

A content-driven marketing campaign will engage the world to see what we're capable of, look at the innovations and strategies that have come out of our campaign to date. We've had one of the hardest audiences to engage with, as a large part of our demographic includes the elusive generations Y and Z - yet these same generations have put in much of the legwork to date.

From the Mayor to alumni, to high school children, to impassioned city thinkers, Dunedin has been ferociously advocating on behalf of the Gigatown brand from the beginning. We will market Dunedin as a Gigatown not only through numerous events, digital initiatives, and media opportunities, but by advocating on its behalf on a daily basis. A passionate brand advocate is worth more than one story in the media. We're proud Dunedin now has 33,000 passionate brand advocates.

The internet has become a place for sharing and accessing information. We've well and truly moved beyond the mindset that says holding information is power, to one that says sharing information is greater power. We will share our knowledge, and best position Dunedin to lead NZ into a GigaNation transformation.

Enterprise Dunedin, the City's marketing and economic development agency, will help us market and promote the city as Gigatown. We will build on existing partnerships with our public institutions, business and community organisations to further exploit marketing and media opportunities. Initial discussions have led to a four stage approach.

At the heart of the campaign will be our success stories, with an underlying theme of businesses, thought leaders and community initiatives that embrace innovation, entrepreneurial spirit and the Gig. The stories of our success will become legend, told by all who experience them. Dunedinites will tell everyone. Our website and social media channels will be important, but content is king when it comes to online marketing success, and video is emerging as the most powerful online content. This all starts with our video supporting this plan.

We will strategically distribute our content to niche groups of entrepreneurs, thought leaders, youth and innovation hubs around New Zealand, and the world. It will be delivered through social media and online advertising, "Word of mouse" will do the rest - our content will start to appear in social media feeds and on influential blog sites.

Our campaign will be backed up with a PR strategy that disseminates our success stories through national and international media. Tourism New Zealand will help target specific international media to be hosted in our Gigatown.

STAGE 3 ATTRACT BUSINESS EVENTS

While most convention centers, hotels and meeting spaces offer wired and wireless internet connections, connecting to a gigabit network could give Dunedin an unprecedented edge when it comes to attracting conventions and trade shows.

Our recently redeveloped high speed conference venue, The Dunedin Centre, is already attracting business events to the city. Winning Gigatown will give us a competitive advantage to win international conferences in the ICT sector - which Dunedin is already bidding for - and attract industry leaders and international networks.

STAGE 4 LEVERAGE INTERNATIONAL RELATIONSHIPS

Dunedin City has close ties to its sister cities of Shanghai, Otago and Edinburgh. What opportunities China might see in investing and growing our Gigatown are not yet clear, but we'll let them know they're welcome.

Our Alumni networks, the largest in NZ, will be used to promote the advantages that Dunedin can now offer for new businesses that will benefit from gigabit internet. University of Otago alumni are actively searching for a way to return to and work in the City, or to look at ways of supporting its endeavours.

Finally we will encourage existing businesses in Dunedin to tell their peer networks about Gigatown, and leverage their own international connections to help the City.

How will you share what you learn and do in Gigatown with other towns, cities or institutions across New Zealand?

While high-speed internet will allow us to connect in new and faster ways, it is up to us to find and develop new models of engagement that go beyond speed and technology to build a stronger, more connected community.

Our lessons, failures, and successes will all be documented online freely and openly. When it comes time for more towns to access gigabit services, they won't be starting from scratch. It's all about collaboration, and we've lead by example during this competition to show how Dunedin can galvanise for the greater good.

"This year Animation Research won an Emmy Award for their America's Cup App. It was an award that truly demonstrated the power of the internet and how we will work in the future. To build that app, Animation Research collaborated with a small company in Queenstown, another in Timaru, a third across town in Dunedin. They then linked all of that, in real time, with a team in San Francisco. The award was for "Outstanding New Approach to Sports Coverage". That's the power of collaboration, that's the future for our province. We want gigapower to amplify such potential."

Nathan Martin, ShowBoat

If you were hosting a Gig Club Conference, what would it cover and who would you invite to speak and why?

We will host a Gig Conference freely sharing keynotes through live HD streams, encouraging participation through webinars, and hosting global roundtables.

The aim is to inspire, educate and collaborate. We will create a legacy for Dunedin through the conference; delegates will have the opportunity to collaborate with the wider community to solve existing city problems and challenges using the gig.

We will focus on the economic benefits we have experienced, our smart city projects, lessons learned and future innovation opportunities. We will showcase the businesses who have seen transformation in our community, and how gigabit internet has increased social connections, delivered new services and connected Dunedin to the rest of the

GIG PARTNER NETWORK - BUILDING COLLABORATIONS

Our Gig Partner network will allow others to engage with us online, and see our progress against this Plan. This is a living document that all will be able to access, contribute to and share in. We will provide the correct forum for everyone to share ideas, comment, and ask questions about our progress - success and failure.

This not only helps spread news across our community, but helps facilitate us to engage with and learn from other Gig cities around the world.

In December we will have our first Digital Sister City Google Hangout between gigabit enabled cities Chattanooga, Pau and Dunedin. From there we will connect with other Gig cities and continue sharing knowledge.

world. We will involve smart technology experts, disruptive thinkers from our startup community, and naturally, we will capitalise on our world-class speakers and thought-leaders at the University of Otago. But we will also tell the stories from the people on the streets, to explain what it is like living, socialising, and working in Gigatown, and how it transformed Dunedin.

A Gig Conference would not be your normal conference - there would be no conference bags and delegates will be able to design their own conference programme. The entire conference will be streamed online live from Dunedin for those who cannot make it. Open sessions will allow general public attendance, and ultimately a wider community understanding around the opportunities to leverage the Gig.

Our vision, our future.

There is a Maori saying, Ka Tangi te Titi, that describes a humble muttonbird (a true Southern NZ icon) that travels the world seeking opportunities but always staying firmly focused on its home.

The Gigatown competition has brought new meaning to this story, and has helped us bring together the plans and visions that will see us travel new highways to the world, seeking opportunities but always staying firmly focused on our home: GigatownDunedin.

GOAL

Lead a GigaNation

Spearhead New Zealand developments over gigabit fibre and share the learnings with the rest of New Zealand, and the world.

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Build the Gigatown Dunedin portal	A single portal for Gigatown Dunedin (gigtowndunedin.co.nz) that helps grow engagement and collaboration on established forums, gives access to the open source learning channels and shares open reporting on progress of the gigatown plan for success achievements and failures.	Portal operational	Digital Office	Running
Develop and establish the Gig Partner Network	A regular google hangout that expands on the current gig city relationships and encourages collaboration between gigabit enabled cities around New Zealand, and the world.	Two joint projects established with other gig cities	Digital Office	Started
Host an annual Gigatown summit	Share the knowledge and resources of being Gigatown nationwide, including live streaming conference, annually to share knowledge and process Teleconference facilities	Inaugural gigatown summit hosted in March 2016	Digital Office Seek support from Enterprise Dunedin	Not Started

GOAL

Marketing and Branding

Gigatown is a once in a lifetime opportunity to change perceptions about Dunedin, and position ourselves as the Digital capital of NZ

ACTION	OUTCOME	MEASUREMENT	LEAD BY	STATUS
Alignment of existing Dunedin brand with Gigatown values.	Promote recognition of Dunedin, set us apart from competition, establish an emotional connection with target markets and provide value.		Seek support from Enterprise Dunedin	
Develop a national marketing campaign to capitalise on the Gig	Changing perception and recognition of Dunedin as Gigatown, the digital capital of NZ, to both city residents, visitors and people looking in from the outside promoting economic development and higher visitation.	Campaign executed mid-late 2015	Seek support from Enterprise Dunedin	

ATTACHMENT 4

Waldronville Community

SUBMISSION TO THE DIGITAL ENABLEMENT PLAN



Introduction

In mid-August an initial public meeting was held in Waldronville to gauge local support for Fibre in the community. A good number of households were represented, with thirty three members of the community coming to show their interest.

Waldronville is a modern family oriented community situated between the Dunedin suburbs of Green Island and Ocean View, having around 200 households with active new building and development with the average house selling price of \$360k and some property values being around \$1m. Waldronville has property ownership of 76% compared to the Dunedin average of just 52%.

Waldronville has been classed as rural in the telecommunications ratings but is residential by DCC ratings. Approximately 66% of the Waldronville population currently have Internet (compared to around 53% Dunedin wide). There are many home businesses, professionals and trades living in the area that require high speed Internet to effectively run their businesses, especially cloud services. There are also many who would benefit from high speed Internet for educational purposes.



Key Projects

We would like to see Waldronville (including Wavy Knowes) have a high speed Fibre Broadband extension. The Fibre goes past Waldronville to get to Ocean View and Brighton and we don't believe that Waldronville should miss out when it involves the laying of the Fibre to just a few extra streets. We are also unsure whether Waldronville has been correctly deemed as rural by the authority. A new subdivision within Waldronville on the site of the old Waldronville School is now already being supplied with Fibre, so this will create a community where half have, and half do not have access to this service.

The below points identify the benefits to our community having high speed fibre

- Entertainment
 - The increase in online streaming means many in the community can't access using multiple devices. The more demand there is put on our current service the slower it gets. High Speed Fibre would eliminate this.
 - We also believe that the future of Entertainment will most likely become more and more an online experience as time goes by and a lack of Fibre will be crippling in this respect.
- Education
 - Although we have no schools in our direct area since the government merger of various schools, we have many Primary and Secondary school children living in Waldronville. Better broadband would assist furthering education and skills outside the classroom and would encourage distance learning opportunities for other residents.
- Economic
 - Faster broadband would enable residents to work more efficiently from home.
 - It would enable working from home for businesses uploading and downloading a lot of data. i.e. updating software and backups
 - Opens up Cloud computing for the local businesses, e.g. Photographer and local Architectural Designers.
 - Online services like Xero etc.
- Community
 - Fibre would future proof the community for new technology.
 - Without Fibre property prices will begin falling as buyers choose to buy in areas where more effective services are available i.e. new subdivisions.
 - Fibre would enable accessing and efficiently utilising civic services based online e.g. council district plan etc.
- Tourism
 - The Southern Scenic Route runs through Waldronville and although Waldronville is not a tourist destination as such many cyclists and tourists pass through as it is the main route south to the Catlins etc. The future national cycleway will also be taking this route.
 - Beachlands Speedway hosts national events which may also benefit from High Speed Internet / Wi-Fi, live streaming of international events

- Sports teams, accommodation operators
- Healthcare
 - Future access to online care providers

Other Projects we would like to see happen:

- Fibre education and uptake campaign
- Extension of High speed Fibre
- Educating around opportunities and benefits of fibre
- Connect the community and bring them closer, finding roots again
- Smart technology
 - bus stops
 - metering water quality at estuary
- Island Park Golf Club
 - Run code camps
 - Run senior net
 - Free Wi-Fi

Conclusion

In conclusion at the very least we would like to see High Speed Fibre Broadband available throughout Waldronville (including Wavy Knowes). As indicated above it would have many benefits for our community.

Footnotes:

Thank you to Nicola Reeves for the use of her image.

The Statistics used are from the 2006 census and although slightly out of date we believe it still give a true representation of the area.

Prepared by the Waldronville Steering Team (with the assistance of the Saddle Hill Community Board).

Outram Digital Enablement Plan 2015

Notes from community consultation 17 August 2015

Problems / Opportunities

Entertainment

- connectivity issues around 3pm
- online video streaming services like Netflix
- continue education outside school hours
- using multiple devices

Economic

- video calling is often not possible and hinders business communications
- limited connectivity makes it hard to engage and connect internationally
- data heavy businesses cannot operate effectively and efficiently
- increase efficiency and make more money, increased productivity
- access more online services such as cloud services like xero
- expanding existing businesses working from home
- business innovation and encouraging entrepreneurs

Education

- furthering education at home
- technology expected
- video consumption

- tertiary institutions

Community

- want to connect more closely with the CBD and more urban areas
- access council and other online services effectively
- bridging the digital divide
- attracting young families into town

Tourism

- opportunity around Railtrail
- tourist Kiosk
- free wifi

Projects

Steering team established

Servicing area with limited or no broadband

Free wifi

Educational campaign

- uptake and benefits
- comms plan

Community access to UFB and technology around it

- community training
- ambassadors programme and troubleshooting
- learning hub
- library or school?

Discussion on projects and information for DEP - meeting 31 August 2015

PROJECTS

COMMUNITY MEETING/CONSULTATIONS

Engage the Outram community through community meetings and consultations to establish what issues the community are facing with connectivity and to discuss what advantages, benefits and opportunities would be created with greater improvement in connectivity.

STEERING GROUP

Establish a group of 3-5 people to oversee and assist the digital enhancement plan projects and help drive momentum

FREE WIFI

Capped time free

Same device cannot reconnect for 24 hours

Captive portal to a specific website which would include event information or business advertising

Businesses can advertise which will contribute to operational costs

Apply for funding through Outram Charitable Trust

EDUCATIONAL CAMPAIGN

Door to door survey to

- promote benefits and opportunities that are possible with UFB/RBI
- canvas uptake if fibre is made available in Outram
- gauge interest in a learning hub and what aspects of learning the community would like to have available

Engagement of the community online and offline to provide updates of progress with the DEP projects and rollout process

Promote available options; including different ISPs, their services, the plans they are offering and how to access them

No cost??

COMMUNITY ACCESS TO UFB AND TECHNOLOGY AROUND IT

Establish a learning hub in an existing community facility where people bring their own devices

Develop an ambassador's programme to help provide training and education on computer basics

Enables the community to be more connected with CBD and surrounding urban areas

Bridging the digital divide and allowing access to council and other online services more effectively

Self-funding

TOURIST KIOSKS

Establish interactive kiosks in the two cafes in Outram with detailed information on the area, tourist activities in the surrounding area eg Central Otago Rail Trail, accommodation etc

Include QR codes to allow login from personal devices to a specific site that offers activities eg a walk around town that gives information on places seen along the route

Apply for funding through Outram Charitable Trust for establishment. Ongoing cost minimal with the option of being self-funding.

INFORMATION KIOSK

Expand on an existing Outram Charitable Trust of a noticeboard with maps posters of community events and things to do. This will be situated in a high traffic area by the dairy and public toilets.

A display which will stream videos of the area, information about the area, upcoming events and can direct tourists to the interactive kiosks which have more detailed information

Management of content and ensure 'cycle' of the information is not lengthy

Apply for funding through Outram Charitable Trust. Ongoing cost minimal with the option of being self-funding.

SERVICING AN AREA WITH LIMITED OR NO BROADBAND

Significantly improved connectivity, using fibre, presents benefits and opportunities in the following areas

Entertainment

- reliable and more consistent connection during hours of higher demand - 3pm to 12.00am
- online video streaming services like Netflix
- using multiple devices on the one connection

Economic

- consistent connectivity means video and/or conference calling is a reliable means of business communications, especially when needing to communicate internationally
- data heavy businesses can operate more effectively thus increasing efficiency and make more money from increased productivity
- access more online (cloud) services eg online accounting programmes like xero
- expanding existing businesses working from home
- promotes business innovation and encourages entrepreneurs

Education

- education outside of school or tertiary institution hours ie homework, study, assignments
- increase in information taught through video online
- technology, cloud based services and websites contain more content that require

Strath Taieri /Middlemarch Digital Enablement Plan

Our vision is for the community and visitors to be able to confidently use digital technologies for the betterment of everyone's daily lives and the sustainable economic development of the district.

Objectives:

Our important objectives are:

- To enable Strath Taieri residents to work from home.
- To leverage the benefits of a faster Internet connection for visitors to the Otago Central Rail Trail and travellers from the Taieri Gorge train and elsewhere. For example free wifi.
- To involve the local school in demonstrating how it could use UFB for the community.
- To create a community hub and business/education hub at the Strath Taieri Community Centre.
- To improve connectivity between the Strath Taieri and beyond.
- To enhance connectivity in emergency situations.

Our Projects and Actions Required:

PROJECT LEADERSHIP		Estimated Date to achieve
Establish Steering team		Achieved- September 2015
Communicate by establishing a regular reporting process using the monthly Taieri Pet Newsletter to share digital information and progress.		November 2015
Review digital enablement programme as projects are developed and in the light of changing needs and advances in technology.		Ongoing
COLLABORATIVE ENGAGEMENT FOR THE DELIVERY OF FAST BROADBAND Establish Digital Office/Council led project team to work with appropriate providers to accomplish the delivery of fast broadband as soon as is practically possible.		November 2015

COMMUNITY ENABLEMENT

Investigate alternatives for providing faster broadband connections; for example wireless broadband.	Liaison with project team- November 2015
Work in conjunction with local school and interested individuals/groups to create and provide community-learning hubs at the Strath Taieri School and Strath Taieri Community Centre.	August 2016
Provide opportunities for residents and businesses for ongoing access, training and use of the community-learning hub.	October 2016
Improved opportunities for residents and businesses for ongoing access, training and use of community learning hubs.	Ongoing
Improved opportunities e.g. local history, promotion groups and for medical consultations.	Ongoing
Enable conservation of resources and retention of business and learners in the region.	Ongoing

BUSINESS DEVELOPMENT & GROWTH Install web cam to enable tourists to check weather conditions. Provide a free wifi hot spot including identifying the capability of existing local technology and the potential for development. Enable farmers to achieve improved data logging and transmission. Allow farmers and other businesses to use up to date digital technologies. Liaise with mentoring services providing support for businesses to enhance their digital capabilities.	Date yet to be determined. November 2015 Date yet to be determined November 2015
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Blueskin Bay (Waitati and Warrington) Community Digital Enablement Plan

Steering Group Members:

Sally Brown (Resident & owner Blueskin Nurseries & Café Ltd)

Contact person: 03 4822828 email: sally@blueskinnurseries.co.nz

Alasdair Morrison (Waikouaiti Community Board & Caledonian Marine and Engineering Services Ltd)

John Kaiser (Home business)

Geraldine Tait (Waikouaiti Community Board)

Hamish Park (Warrington residents & Home based IT office)

Community website – blueskin.co.nz

Blueskin Bay is located approximately 20 kilometres north of Dunedin City. Three main settlements surround Blueskin Bay - Waitati on the south side and Warrington to the north. The Blueskin Bay Community is a very diverse and forward thinking one with many different non-profit groups and businesses thriving in our area. (A comprehensive list of local businesses and organisations is attached)

Our Blueskin Bay community consists of a high percentage of people with a good education; relatively high incomes, most with internet connections, a high uptake of the latest technology and with an expectation of good educational outcomes for their children.

We have a very limited public bus service in our area, only three times a day commercial service, which does not go to Warrington, and a limited school bus service. This means that students both at high school and at tertiary institutions are more reliant on the internet because access to the library is more difficult particularly for those living in Warrington. Students are expected to use the internet for research and to access course content. In future years a greater percentage of courses will be delivered on line.

The recently completed Blueskin Bay Community Complex incorporates the Dunedin City Council operated Library and Service Centre, together with a Community Meeting Room which is well equipped with audio visual equipment. Next door is Waitati Community Hall which provides facilities for large gatherings and functions alongside various community events. The Community Hall in Warrington provides similar facilities.

Educational facilities

Blueskin Playcentre (pre-school education)

Warrington Playcentre (pre-school education)

Warrington School (Primary School year 1-8)

Waitati School (Primary School year 1-8)

Te Whare Wananga (Maori education facility, offering youth programmes)

Orokonui Ecosanctuary

Blueskin Bay Library (DCC Community Library)

Vision and Objectives

The Blueskin Bay community has a strong sense of place and we are well known for our sustainable thinking and strong local business base. Ours is an attractive semi-rural community on the edge of the Blueskin Estuary twenty minutes from Dunedin. People are drawn here by the lifestyle. Many professionals and small business people have recognised the potential to establish home based businesses here.

For our community to progress and continue to grow in the future we need to attract more local businesses, educational and tourism opportunities. Central to this is to have guaranteed high speed internet preferably a fibre optic connection.

We want to be seen as an innovative community full of opportunity for all residents new, young and old.

Identify Projects

PROJECT NAME	DESCRIPTION	COMMUNITY/BUSINESS
Community & digital training	Free basic digital training held at the Blueskin Bay library on a monthly basis to enable the community to use to maximum potential	Community
Distance learning	Educational campaign to maximise distant learning for school and tertiary training. Maintaining opportunity for all in our community to further their education to benefit their own and the community's future.	Community
Blueskin Bay Website & Facebook Page	Upgrade the current basic website and Facebook page to provide a comprehensive digital communication facility for the whole community	Community: Utilising local groups and individuals with the appropriate expertise
Free wifi in the main streets		Community
Tourism	Gallery on Blueskin, Orokonui Ecosanctuary, various accommodation providers, freedom camping ground at Warrington Domain	Business
Rural business connection	Small businesses are the heart of our local economy and to maintain this we want to create a community hub to bounce Broad band to all rural areas and home based offices	Business
Blueskin Nurseries & Cafe	After 34 years in business grown to 15 full time staff (more than 50% of who are local) Now is the time when we want to expand and offer our customers better online services and wifi for visitors in the café(attracting tourists & visitors to Waitati)	Business

Appendix of Local Blueskin Bay businesses

Waitati

Liz Abbott Artist

Arden House (accommodation)

Andy Beecroft (Arborist) (Home Office)

S and H Beamish Property Rentals (Home Office)

David Begg (Pure Services Ltd)

Graeme Bennett (Farmer and Contractor)

Blueskin Bay Library (community facility_

Blueskin Nursery and Café (Wholesale and retail plants and garden supplies)

Blueskin General Store (Groceries and Mail depot)

Blueskin Mowers and Chainsaws (Sales and maintenance)

Blueskin Electrical (Home Office)

Blueskin Resilient Communities Trust (Promotes local alternative energy and conservation projects)

Blueskin Lodge (accommodation)

Blueskin News Community Newsletter (Home Office)

Blueskin Play Centre

Louise Booth JP (Home Office)

Hagan Bruggemann (Electrical Engineer, Specializing in Alternative Power schemes) (Home Office)

Cargill Contracting (Excavation, transport, road repairs etc.)

Caledonian Marine and Engineering Services Ltd (home office)

Chem Dry Otago (home Office)

Creative Memories Paper craft (Home Office)

M and R Dixon (Taste Nature) Home Office

Gallery on Blueskin (Art gallery)

Sharon Gibb (Canvas Works)

Mark Gibson (Arborist) (Home Office)

Habitate Nursery (Jason Ross) Trees and consultation

Brian Hailes Accounting

Harvey House (accommodation)

Jenny Haydon Yoga Tutor (Home Office)

Sinead Jenkins Photography (Home Office)

Alice Laws (Pilates)

Chris Linsell On line Tutor/ Academic

Dave Littleton (Engineer, home office)

Preston Lovett Builder (Home Office)

Dell McLeod Filmmaker/Facilitator

Gary McFarlane Arborist (Home Office)

Mopanui Studios (Builder) (Home Office)

Derek Onley Illustrator and Environmental Consultant

Orokonui Ecosanctuary

Jenna Packer Artist

Rosemary Penwarden Freelance Writer

Hank Rebmann Tree Maintenance (Home Office)

Roadside Attraction (clothing manufacture and retail outlet)

L. M. Scott Builder (Home Office)

Peter Smith (Financial Adviser)

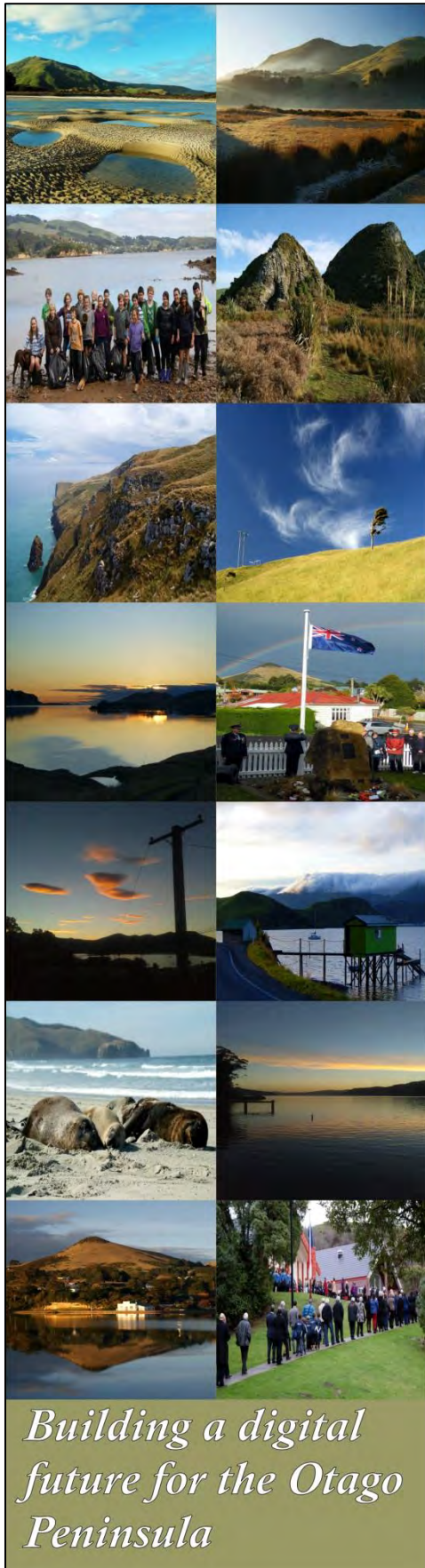
Mark Spencer (Horse Arena)

Sue Stephenson Child Psychologist (Home Office)

Graeme Still (Rural Fire)
TechniPharm Otago Southland (Farm product sales and service)
Colin Thom (Builder) (Home Office)
Mike Thomson (Farmer)
Virginia Toy Academic/ Researcher
Metiria Turei MP (Home Office)
The Vegan Bakery (Home Office)
The Village Potager (Food production)/ Word Wizard Marketer
Waitati Volunteer Fire Brigade

Warrington

Shaun Aldrich Geologist
Paul Ashford Landscaping (Home Office)
Lucy Dodds Tertiary Student
Paul Hersey Author
Shelley Hersey Educational Consultant
Mark Horsefield Builder (Home Office)
Niaomi Ingram Tutor (Home Office)
Dennis Kyle Farmer and Home Maintenance (Home Office)
Kelvin Lloyd (Ecologist)
Blueskin Contracting (Paul McHoull) (Home Office)
Elspeth Moody Garment Production
Patrick Moody Solar (Home Office)
Eric Newman (Builder) (Home Office)
Steve Ozanne Farmer
Hamish Park IT (Home Office)
Nathan Parker Electric Bike Sales and Marketing
Jozephine Parker Tertiary Student
Tim Poppins Geologist
Hannah Saddler Tertiary Student
Fredericka Schmaltz Art tutor/ Artist (Home Office)
Chris Skellett Writer
Katherine Stuart Farmer
Templeton Contracting (Home Office)
John Thom Farmer
Graeme Thomas (Contractor) (Home Office)
Fergus Thompson Radiology Engineer
Heidi Tims Skin Care (Home Office)
Barbara Ward Natural Health Practitioner (Home Office)
Blair Ward IT (Home Office)
Allan White Farmer
Ken Whyte Farmer
Lucy Wing Academic/Researcher (home Office)
B Yeo Graphic Design



An Overview of Issues and Opportunities for the Provision of Broadband Services on the Otago Peninsula

**A Submission to the Digital Enablement
Plan**

Prepared by Paul Pope

**Deputy Chairman of the Otago Peninsula
Community Board**

Summary of Submission

- Ecotourism is a major industry of the Otago Peninsula and generates \$100 million/annum and creates 800-1000 jobs for Dunedin City.
- Tourism operators are disadvantaged by insufficient bandwidth to be able to create innovative global opportunities to promote their attractions and services.
- With the growing Asian market visitors expectations of connectivity during their visit is substandard compared to what they are used overseas.
- Opportunities for additional commercial opportunities would be enhanced by better quality internet delivery enabling visitors to access more resources, research events & activities and book accommodation and attractions.
- Global online connection between the Peninsula and its attractions with our guests and their home countries would enhance the visitor experience by sharing encounters in real time.
- Home-based and other businesses in the current economic climate need flexibility and rapid information response to be efficient and competitive.
- Home-based business on the Otago Peninsula is on the rise due to the proximity of schools, services and lifestyle opportunities, but it's hampered by unreliable and slow broadband capacity.
- Film-making and advertising has the capacity to grow utilising the Peninsula landscape and better broadband would make its selection as a site more appealing to overseas film crews.
- Rural broadband services need to be expanded to allow coverage for isolated areas of the Peninsula including townships like Harwood and Otakou.
- The Peninsula has a high number of secondary school students living on the Peninsula and better broadband access will improve their educational opportunities and accessibility to school resources.
- Better broadband coverage will allow better participation in local government services and consultation.
- Biodiversity and wildlife lies at the heart of the Peninsula and initiatives in habitat restoration and monitoring would benefit from better Wi-Fi and broadband connectivity.
- Shared opportunities to provide better services should be explored between the Peninsula and other adjacent harbour areas.
- The demand and use of mobile applications is an untapped market for the Otago Peninsula in tourism, recreation, heritage and conservation.

Introduction to the Peninsula Community



The Otago Peninsula is a unique region of New Zealand steeped in a rich cultural and biological landscape of national importance. The Peninsula covers the urbanised area of Waverly suburb, incorporates Tomahawk eastwards to Taiaroa Head. It includes the settlements of Pukehiki, Macandrew Bay, Broad Bay, Portobello, Harwood and Otakou. Despite its proximity to the city there is a significant rural community living in isolated areas of the eastern extent of the Peninsula. The focus of economic activities on the Otago Peninsula is farming, fishing, wildlife, tourism and home-based business developed around the unique lifestyle opportunities found on the Otago Peninsula. These activities are representative of the current local and regional economy. (*Otago Peninsula Community Board*)

Otago Peninsula Statistics

Population: 4,330

Households: 1,665

Education: 3 Primary Schools, 1 Kindergarten and 3 Preschool facilities



Tourism on the Peninsula

"In my opinion the Otago Peninsula is the finest example of ecotourism in the world". British Conservationist, David Bellamy

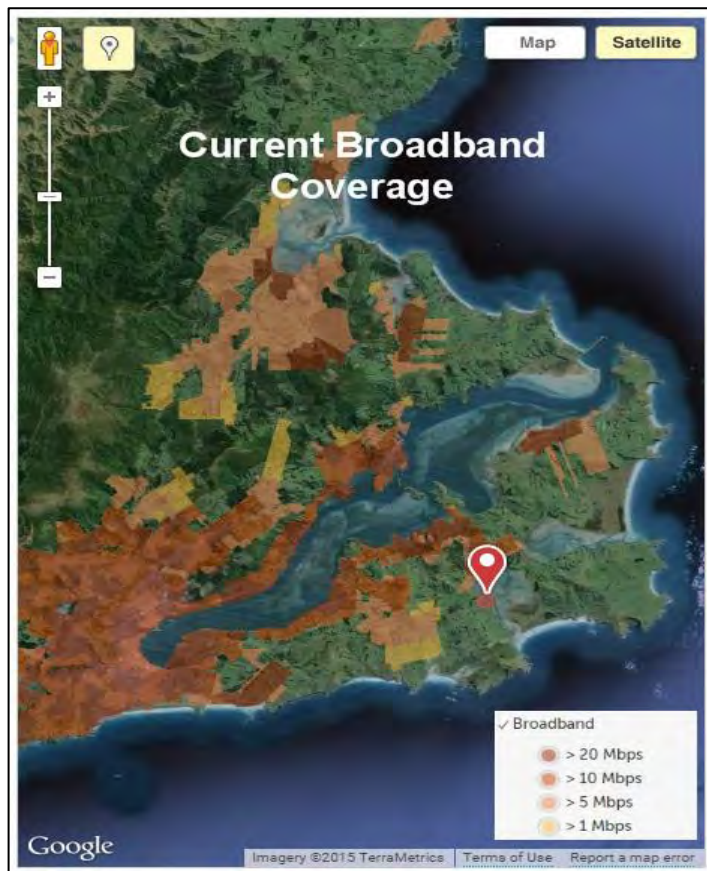
Biodiversity, wildlife and ecotourism are of major economic and conservation importance to Dunedin city. Avian biodiversity is of particular importance to the ecotourism industry on the Otago Peninsula with visitors wanting rare and a unique experience with the Yellow-eyed Penguin, Blue Penguin and Royal Albatross. Similarly, marine mammal species such as the New Zealand Sea lion and New Zealand Fur Seal have become popular visitor attractions. The 2012 BERL report noted that tourism contributed \$225 million (4.6%) direct GDP,



employs 3,523 FTEs and has 580 businesses in the sector. Clem Tisdell wrote in his 2007 Report "The Economic Importance of Wildlife Conservation on the Otago Peninsula –20 Years on" that the Otago Peninsula wildlife alone brings \$100 million into the Dunedin economy and creates 800-1000 jobs.

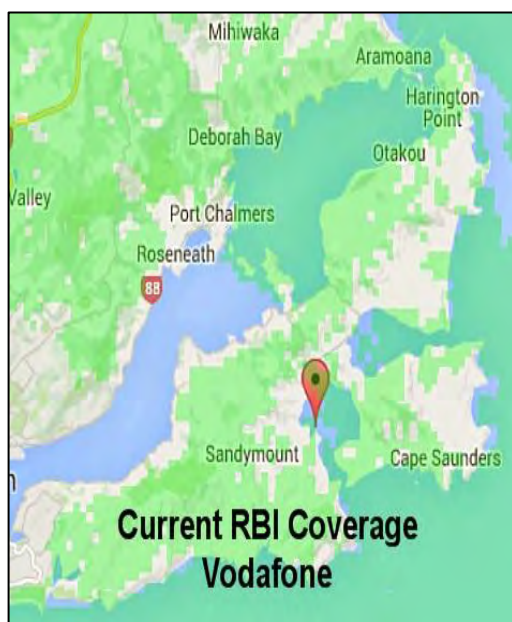
About 2 million visitors come to Dunedin each year and the Peninsula receives about 29% (500,000 visitors) per annum. The Royal Albatross Centre at Taiaroa Head receives approximately 150,000 visitors, Larnach Castle over 100,000, Penguin Place, Natures Wonders and Monarch Wildlife Cruise between

25,000 and 50,000 each making the Otago Peninsula of key importance to the visitor industry.



Otago Peninsula was named one of the Top Ten Destinations for Cycling and one of the top ten destinations in the world for "twitchers" (birdwatchers) by Lonely Planet guide in 2010. With its outstanding rural landscapes and unique wildlife experiences the Otago Peninsula has become Dunedin's iconic destination for nature tourism, nature tours, scenic drives, walking trails and heritage tours and attractions. The Peninsula is also an important recreation resource for residents of Dunedin and its environs. With major wildlife and landscape attractions local accommodation, hospitality and retail businesses are also well established on the Peninsula.

Current Broadband Coverage



The level of coverage of Broadband on the Otago Peninsula is concentrated along the western facing residential areas alongside the Otago Harbour on Portobello Road to the Portobello Township. While some coverage occurs around Otakou rural coverage, particularly around the eastern coastline out as far as the Royal Albatross centre and other tourism centre's is low.

Current fibre coverage is restricted to the school sites at Macandrew Bay, Broad Bay and Portobello schools. The planned roll out of UFB by fibre will only extend to Portobello Township by 2017 according to the Chorus plan. Rural broadband coverage recorded by the Vodafone network

currently does not cover the isolated eastern areas of the Peninsula. Important areas of the Otago Peninsula currently receive will not be part of the fibre roll out and areas around

Pukehiki (Larnach Castle), Taiaroa Head and the eastern coast coverage is currently slow and often unreliable.

Opportunities Created from Better Broadband Coverage

Better broadband on the Otago Peninsula will create greater home and business capacity and significantly improve business performance. It may lead to;

- the development of a new business models
- better access to new markets
- improvement in customer relationships and operational savings
- a competitive advantage over others in the market place

There are a number of home based businesses and accommodation providers on the Otago Peninsula that faster broadband would create greater flexibility from home based businesses and increased productivity. Importantly in the isolated areas of the Peninsula faster broadband will reduce travel time to the central city by allowing greater opportunities to work productively in home based enterprises and accommodation services.



Better broadband will improve communication and promotion of the Peninsula, particularly its attractions and services and offers opportunities in tourism, film making, conferences, and advertising on a national and international stage. It will also connect people and ideas, share information and work in real-time or over a period of time from anywhere in the world.

A Case Study of Application Development for Conservation on the Otago Peninsula



The biodiversity of the Otago Peninsula is of national and international importance. A hardworking local group have been ambitiously removing possums from the landscape in an effort to make the Peninsula possum-free. This programme has significant benefits to the biodiversity of the area and has involved considerable consultation

and development. One of the innovative projects of the group has been the trialling of possum traps that can be checked and the contents reported using a smartphone. The app meant rangers would come and set the trap on properties and residents would only have to check the trap and scan a QR code (similar to a bar code) on the trap if it had a carcass in it. The application would be used in urban sites of the peninsula and would save a significant amount of time checking traps.

The project is an innovative one but has limitations because of variations in the cellular network that the Peninsula has. Better broadband and better Wi-Fi would improve its efficacy. Improved broadband coverage would also allow onsite development of similar applications for recreation, tourism, accommodation and further environmental monitoring.

A Case Study of Local Government Consultation



In the last 2-3 years the management of freedom camping has been a significant issue for the Otago Peninsula. Trials of site for campers were found to have been ineffective and the City Council faced problems with behaviour, facilities and conflicts between residents and campers. The City Council undertook a consultation programme to gauge the views of the community over the issue. The

survey was undertaken online and members of the community such as Harwood were unable to access the survey online due to poor broadband access.

A Case Study of Tourism Operator – The Otago Peninsula Trust

The Otago Peninsula Trust operates Glenfalloch Woodland Garden, Fletcher House, Fort Taiaoroa, and the Royal Albatross Centre. Each of the areas of operation of the trust is a major tourist, heritage, hospitality and biodiversity attraction on the Otago Peninsula. In 2014 the Albatross Centre had nearly 160,000 visitors, of which 28,000 visitors take the tour and the adjacent Pukekura Blue Penguin operation had 7000 take the tour. As a major tourism operator on the Peninsula with similar issues to other operators the growth of the global tourism sector is moving forward rapidly on the basis of improved global connectivity. The Trust and other operators on the Peninsula are disadvantaged by not being on a level playing field with other operators in regions where broadband connectivity is of better quality and reliability.

Peninsula businesses are not able to effectively work with cloud based services. At the recent Tourism Export Council conference held in Dunedin, the biggest complaint from visitors was the poor level of Wi-Fi access available through the areas they are visiting in the region.

The Otago Peninsula Trust has several operations in different locations; the bandwidth issues on the Peninsula do not allow their separate divisions to share a server at the central administration office in Glenfalloch. The option of basing a server in the cloud is also not an option for the Trust. Recently, the Royal Albatross Centre won a competition to provide free Wi-Fi to tourists in the area of the centre, but have been unable to meet the needs of operations, let alone expand the service to provide these for visitors.



If fibre based broadband was to extend through main areas of the length of the Otago Peninsula the Trust and other operators would potentially be in a position to share the portion of the bandwidth they are not using with the community and visitors.

The Trust has initiatives to share its education facilities with overseas providers, specifically South America. Those initiatives have not been able to be followed up on because there is insufficient band-width to live stream video for live programming to enable this to happen.

The Trust has in excess of 2000 students per annum through the Albatross Centre on its LEOTC programmes. Presently, it is unable to provide video based education to all schools that are unable to access the program locally where the cost of travel to the location is an issue.

A Case Study of Tourism Operator – Larnach Castle Virtual Tour



Larnach Castle are a world class, iconic destination on the Otago Peninsula attracting thousands of visitors every year and services Tourism, Hospitality, Functions and Accommodation. The Castle is a popular destination for the growing Cruise Ship market. Along with this growth, the demand for Wi-Fi services has grown. As the Tour busses arrive at the Castle the network struggles to cope with the intense demand meaning that Wi-Fi services for Accommodation Guests, Visitors and Conference resources grind to a halt.



The Castle has embraced technology, partnering with globally acclaimed Taylor-Made to develop a Virtual Castle Tour App. You can now experience New Zealand's only Castle through a visually stunning presentation and discover the history that surrounds the Castle and its gardens. This product allows you to delve in to the past and visualise life in the Castle when it was the Larnach family residence. The tour guide is currently available to hire from the reception at Larnach Castle or can be purchased from the iOS App Store & Google Play Store to keep as a souvenir of your visit. Current languages include English and Mandarin Chinese, with more to be added in the near future. This app features high-quality video, imagery and commentary, which provides an excellent supplement and source of enlightening information for any guest to the castle.

A Case Study of Small Business



The Portobello garage was originally the blacksmiths shop - circa 1920's

Portobello Motors is one of two garages on the Otago Peninsula and has a busy and varied service. From repairing tourist's vehicles who break down, servicing various tourist attractions vehicles and buses, daily warrant of fitness checks and offering light engineering for farming and fishing operations. The Portobello garage is a one stop shop for all manner of mechanical repairs and a few that have yet to be invented.

One of the issues for the operator and its clients is the unreliability and speed of the broadband service for warrant of fitness certification. The current NZTA system ensures all vehicles that pass a warrant of fitness have that certification registered by the garage online. Vehicles are unable to be legally registered without a current warrant of fitness. Delays in being able to log on to the NZTA system through unreliable broadband are a common problem and this leaves both the

operators and clients frustrated. For a small business like Portobello Motors it also reduces productivity and adds to unnecessary delays and subsequent labour costs.

Conclusions



There is a strong link between conservation, landscape and the tourism economy on the Peninsula. Our scenery and wildlife are natural resources that draw people to visit and live in the area. That relationship means that we must act in a positive way with agencies, landowners and business to ensure that link is kept strong.

Communication technology has a major role in play in developing the Peninsula's business, tourism and educational economy for the wider benefit of Dunedin's economy. It has also has a significant role in providing better education, governance and connectedness for the community that compliments and adds to their lifestyle.

The challenge for the community and the business sector is communicating its needs and opportunities to network and infrastructural providers. That challenge runs through all aspects of the community and is one that needs to be met if the community and its people are to grow and continue in their dual roles as environmental and business stewards of the Peninsula. Empowering people with better accessibility to technology is a major part of continuing that stewardship.



He aha te mea nui o te ao? He tangata, he tangata, he tangata.

*What is the most important thing in the world? It is the people, it is the people,
it is the people.*

ATTACHMENT 5

Commerce Committee
Bowen House
Parliament Buildings
Wellington

For the Attention of: The Clerk of the Committee

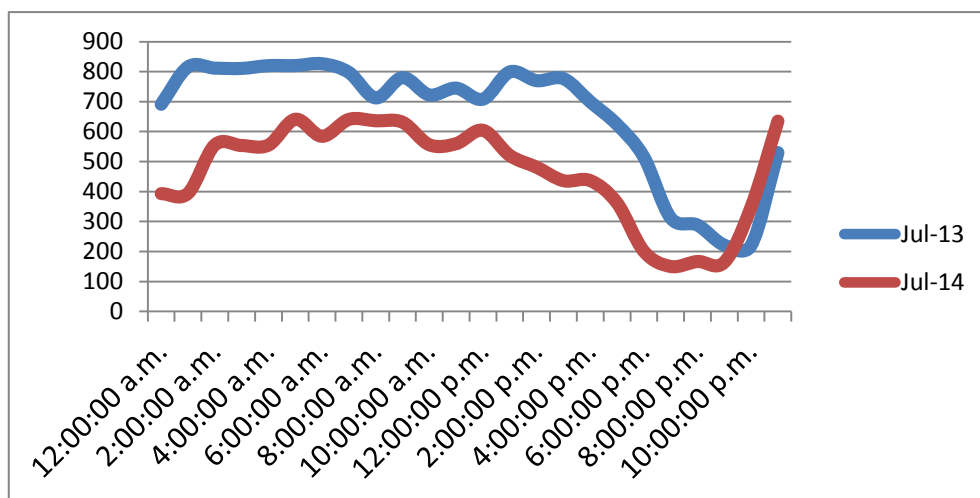
RE: Petition 2011/121 of Tim Gibson and 368 Others

Thank you for receiving my petition above. We, the residents of the Outram Community, wish to submit the following information for your consideration to our request to be connected to the Ultra-Fast Broadband network as soon as possible.

Opening Summary

As a resident of Outram for the last nine years and an avid user of the Internet I and 368 others have become concerned with the degradation of our current broadband internet service to a point that it is now unfit for purpose and is limiting not only families use of modern content provided through the internet but also businesses wishing to utilise the internet.

The graph¹ below compares average hourly speeds from July 2013 and July 2014. It clearly indicates there has been a 30-50% degradation in average throughput and additionally shows



evening congestion increasing and reducing overall usability of the current broadband internet service.

Detailed Information

As appreciated the internet has moved from an information network where people would participate in help forums, swap funny emails and read interesting articles to a content delivery platform with an expectation to deliver streamed HD video / audio content and sharing of media in a far richer format than that of say 2007.

¹ Graphed results from a small service run on my server that downloads a 1MB file every hour (2013) or half-hour (2014) direct from my ISP, the results are recorded and graphed through a simple spreadsheet.

The current Outram community and Broadband;

- Population: 708 (2013 census), 645 (2006) census, 609 (2001 census)
- Dwellings: 282 (2013 census), 246 (2006 census), 222 (2001 census)
- Dwellings with internet access: 65% (2006 census), Otago 59.9%
- ADSL1 BUBA over ATM from the fibre feed Outram (ORA) exchange located at 2 Hoylake Street

Outram currently sits outside the UFB and RBI (DSL) upgrade program areas and Chorus have confirmed they have no current plans to upgrade the Exchange at this time.

With the current ADSL1 DSLAM and associated backhaul our theoretical Full Speed Download / Full Speed Upload (FS/FS) is 8.0 MB/s download and 1.3MB/s upload. As can be seen in the graph above in July 2013 the theoretical download speed was attained in the night-time hours and dropped to around 2.5MB/s in the peak time evening (~68% degradation). For July 2014 this same average speed has dropped to just over 6.0MB/s night-time and 1.5MB/s peak time evening (~75% degradation).

As degradation of our broadband service continues current services like Skype, Youtube become more unusable. As part of my Petition I knocked on doors and gained many signatures, I asked questions around if people had a choice to pay more for a vastly better service would they, most answered yes, others suggested the existing service has deteriorated and should be fixed first. I also had a discussion with one couple whose house bound son had become withdrawn because he was becoming increasingly unable to use the internet in the evening to communicate with friends as he used to due to congestion on the network.

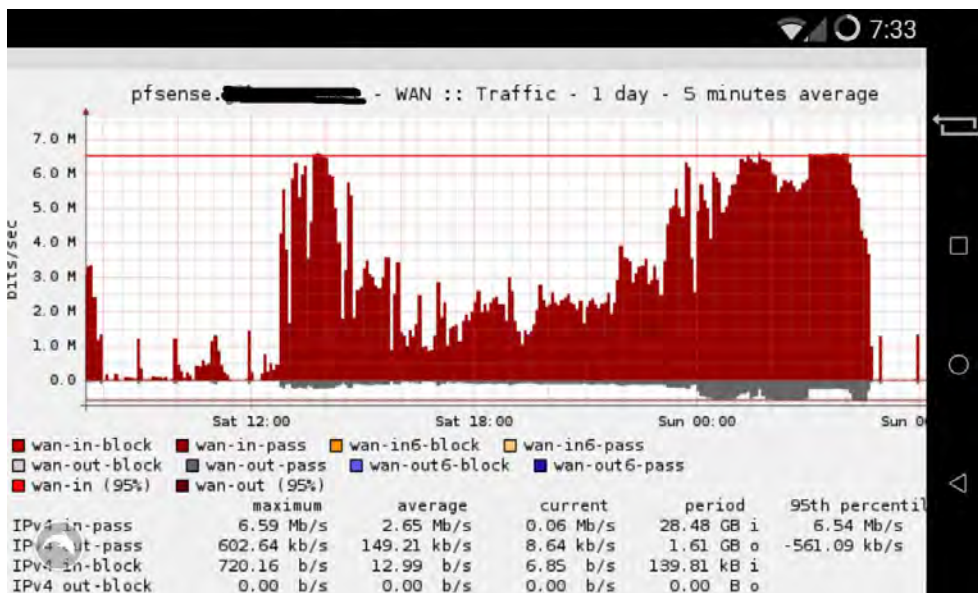
The degradation is largely due to increased demand from not just the Outram community but due to aggregation of users within the Chorus network through to handover points for ISPs. As the wider population within regions who are aggregated on the same Chorus backhaul utilise the modern internet more demand is put on the Chorus backhaul causing more congestion as is seen on the above graph. It has been reported within the media data growth is increasing and many families want more data and faster access to internet based services². Without investment or future state plans congestion will worsen for the population who remain on ADSL1 BUBA over ATM backhaul due to higher utilisation of service availability such as;

- Vodafone TV, Quickflix, iSky etcetera
- Software as a Service
- Cloud storage and backup solutions for home and businesses
- Lightbox - I recently was given a trial usage of this service through the geekzone forums, the service was largely unusable in the evening due to congestion and lowered video quality, were the experience better I would certainly subscribe.

As gaming technologies move further from physical disk purchases to downloading of game data through online services like Steam and Origin additional data consumption and reliability is required. Recently a game was offered through Origin Free Play, this was a 25GB download, for a friend on a 30Mb/s fibre plan it took a couple of hours to download whereas for me due to Chorus congestion it took just under 16 hours, a throughput graph³ is displayed below that shows this. A rough calculation it should have taken around 8.5 hours if there were no congestion issues and full line speed was attained throughout the download.

² <http://techday.com/telco-review/news/kiwis-demand-faster-broadband-and-more-data/175832/>

³ Graph obtained from the RRD Graphing function of the pfSense firewall unit installed.



The ADSL1 BUBA over ATM network is limited and no longer provides a reliable method of broadband delivery to townships and communities such as Outram. More Rural areas that fall within the RBI (DSL) upgrade program area are having cabinets that provide these services to smaller numbers of residents upgraded. This eliminates the ADSL1 BUBA over ATM service and enables a limited number of people in close proximity to ADSL2+/VDSL2 EUBA services that currently suffer no congestion and at least 15-30 times current evening peak time speeds experience by all residents of Outram and other areas independent on their chosen Internet Service Provider.

As Outram falls outside this area it is believed the current solution is Wireless RBI. The Wireless RBI service does not fulfil the needs of current internet usage due to speed, ongoing pricing and low data caps. Additionally the Wireless RBI service has considerable installation costs due to external aerial installation and dedicated wiring. Families wishing to utilise the modern internet would easily consume all their monthly data allowance. It is currently unexpected that the Wireless RBI service will have unlimited data plans or high data caps enabling many of the current and future content types available. Other services such as Wireless Internet Service Providers do offer customised sporadic coverage however future state and competitive costing are unknown.

A substantially better approach for communities such as Outram would be for the existing Exchange and associated backhaul to be upgraded with ADSL2+/VDSL2 technology similar to more rural cabinets, larger towns and city suburbs. This would enable continued competitive pricing from multiple Internet Service Providers and no additional costs to families unless they chose to move to the higher performing VDSL2 service or utilise the Boost HD and Boost VDSL plans being suggested by Chorus and considered by the Commerce Commission currently.

VDSL2 technology on the Chorus network can enable speeds of 70 MB/s download and 10 MB/s upload depending on distance from the cabinet or exchange.

Areas that are truly rural i.e. long lengths of copper wire back to cabinets / exchanges or currently have Conklin's etc would be better serviced by Wireless RBI or WISP as costs to install new cabinets and infrastructure closer to those areas would be prohibitive with little or no additional Return on Investment whether shareholder or taxpayer.

Should there be no investment by Chorus as the major utility provider or addition of Outram to the UFB / RBI (DSL) program we and others throughout New Zealand will be forced to suffer a continued degradation of service and businesses will move elsewhere.

Previously Telecom had a program of upgrading older ADSL1 BUBA over ATM Exchanges and associated backhaul to ADSL2+/VDSL2. Smaller exchanges located around Otago including Clyde, Omakau, Henley and Brighton appears to have been upgraded under this previous program. Additionally cabinets servicing smaller communities for example Lake Waiholo, Taieri Mouth, Ocean View, Waitati and many new upgrades as part of the current RBI (DSL) program have enabled both larger and smaller communities to benefit from increased speed and reduced or eliminated congestion. However Outram and other similar sized communities seem to be in a black spot area where we missed out with the previous upgrade program undertaken by Telecom and again a similar program by Chorus as part of the UFB / RBI rollout.

A recent TrueNet report⁴ entitled “Rural Broadband Users: Are they missing out?” corroborates both points above in that Rural ADSL Broadband internet has deteriorated substantially over time and suffers congestion in during peak time evening usage. Summarised in their report is;

In summary, backhaul from rural sectors is critical to ensuring a better performance for rural users. TrueNet data shows that backhaul is insufficient, causing increasing congestion with rural broadband performance deteriorating over time, and significant loss of speed in the evenings.

While the ADSL1 BUBA over ATM service is a Commerce Commission Regulated Service and is performing above the regulated minimum of 32kbps (basically dial-up) this minimum requirement seems to be used as a point where any broadband service delivery above that speed is perfectly acceptable. Unfortunately with the modern internet of things this is simply short-sighted. The regulated minimum above was set in 2007 where fast broadband internet was in its infancy. Since then larger downloads, streaming media and content delivery has taken off, putting substantial demands on broadband networks designed some 7-8 years ago.

When broadband internet was in its infancy families mostly had one computer that was on the internet only when needed, now however, many families have multiple devices (Televisions, iSky, kids PC's, laptops, tablets, smartphones and even washing machines). Many of these devices are connected continually and many are used at the same time putting even more demand on the limited and degrading service.

Closing Summary

Without either investment from Chorus or reconsideration to add communities like Outram into the UFB / RBI (DSL) upgrade program we are destined to suffer⁵;

1. *Lower speeds for downloading files, or watching video*
2. *Longer times to load Webpages*
3. *Higher latency meaning reduced gaming performance*
4. *Slower Domain Name Server (DNS) response times. Which delays the start of a website download.*
5. *Greater inconsistency of speed throughout the day.*

I Tim Gibson and 368 others ask the House to urge the Government to connect the community of Outram to the Ultra-Fast Broadband Network as soon as possible. With both the Labour and National parties acknowledging poor Rural Broadband coverage by way of additional funds for extending the RBI Program we hope that the Commerce Committee support us and other communities in a similar position.

⁴ <https://www.truenet.co.nz/articles/rural-broadband-users-are-they-missing-out>

⁵ List from TrueNet Rural report.



**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI



Registration Response Form

Dunedin's response to the Registrations of Interest – Support

Seeking information and commitments from local authorities in support of:

- Ultra-Fast Broadband 2
- Rural Broadband Initiative 2
- Mobile Black Spot Fund

Date of this Registration: 10th July 2015

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1. About the Respondent

Our Profile

This is a Registration of Interest (ROI) by Dunedin City Council.

Item	Detail
Local authority name:	Dunedin City Council
Physical address:	50 The Octagon, Dunedin, 9016
Postal address:	PO Box 5045, Moray Place, Dunedin 9058
Website:	www.dunedin.govt.nz

Our Point of Contact

Item	Detail
Contact person:	Des Adamson
Position:	Economic Development Team Leader, Enterprise Dunedin
Phone number:	+64 3 474 785
Mobile number:	+64 27 278 4132
Email address:	des.adamson@dcc.govt.nz

Response to the Requirements

The programme(s) in which we are interested/able to support
• Ultra-Fast Broadband extension (UFB 2.0) • Rural Broadband Initiative extension (RBI 2.0) • Mobile Blackspots Fund (MBSF)

Office of the Mayor



From Mayor Dave Cull

Dunedin is the second-largest city in the South Island. It is often described as the South Island's 'best kept secret' due to the plethora of cultural riches it cradles. As New Zealand's oldest city it has the largest concentration of heritage architecture in the country, alongside an abundance of natural beauty and rich wildlife. In addition, sporting, education and recreational opportunities make for a unique and enviable lifestyle for residents.

Dunedin is a city of opportunity. We have a first class University and Polytechnic. Both of whom boast high quality reputations in innovation and research. Both institutions have grown their skill and knowledge in the economic niches of health technologies, biotechnology, food processing, ICT, design and engineering.

Dunedin is a vibrant and special city, therefore economic growth and development is crucial to maintaining Dunedin's success and identity.

Winning the Gigatown competition saw a shift in the way Dunedin people see themselves in relation to their place on a Digital world stage. Dunedin people are now eager to shape a new future, whereby accessing the global market place is aided by access to the Ultra-Fast Broadband (UFB) network. Furthermore, it is necessary to ensure that all residents of Dunedin have access to Ultra-Fast Broadband so that the city can ensure sustainable economic and community development.

Dunedin hosts 2 million visitors annually. We have a growing tourism market, we have won Gigatown and of course we are now home to Super Rugby Champions, proving yet again, that for a small city we punch well above our weight.

Dunedin's success is the South Island's success, which in turn is New Zealand's success. We must now work together to ensure that our economic development continues to prosper.

Ultra-Fast Broadband 2.0 (UFB2)

INTRODUCTION

By winning the Gigatown competition Dunedin residents and businesses have the opportunity to connect to gigabit Internet. There has been a significant uptake in UFB connections since the competition and a number of new business initiatives and activities have started. Dunedin understands how critical UFB is and the opportunity it can provide businesses and communities.

Outside the central parts of the city it is a different story. The nominated towns in our ROI are not included within the Gigatown plan and have poor Internet access and an unreliable service. Extending UFB will be a lifeline to these locations and an essential infrastructure for economic growth and community engagement.

GEOGRAPHIC LOCATIONS

We wish to nominate the following towns within Dunedin City boundary for the UFB2 extension programme:

- Outram, Dunedin
- Waldronville, Dunedin
- Waitati, Dunedin
- Warrington, Dunedin

Please refer to attachment 1 for detailed mapping information about each location.

2013 CENSUS DATA

	Outram	Waldronville	Waitati	Warrington
Population	711	522	513	450
No. of households	276	196	213	192
Median household income	\$72,500	\$61,300	\$66,700	\$53,800
Percentage of households with internet access	78%	81%	78%	75%

ADDITIONAL INFORMATION

STATISTICS NEW ZEALAND POPULATION GROWTH PROJECTIONS TO 2021

Growth projections supplied are based on a 2006 base for a medium growth rate.

	Outram	Waldronville	Waitati	Warrington
2006 (base)	660	550	520	440
2011	670	540	540	450
2016	670	540	560	460
2021	670	540	580	470

DESCRIPTION OF BUSINESS ACTIVITIES BY TOWN:

	Outram	Waldronville	Waitati	Warrington
Business Activities	- Small businesses operating from home; including graphic design, architect, IT management, real-estate agents, biometrics, photographers, drafting services, database consultancy and more. - Retail; including café and general store. - Trades operating from home; including builders and plumbers. - Education; including school, day care and researchers. - Farming and agriculture; including shearing, vegetable growers, home offices, and agricultural support products.	- Small businesses working from home. - Blackhead Quarry staff.	- Small businesses operating from home; including IT, software development, accounting, photography, artists, and more. - Blueskin Nurseries Café staff. - General Store staff. - Cargills Contracting staff. - Trades operating from home; including builders, arbourists and electricians - Accommodation providers. - Library staff.	- Small businesses working from home; including IT, artists, consultants, designers. - Education staff including school, play centre, tutors and researchers. - Trades operating from home office; including building, landscaping, - Farm and agricultural workers.

Source: Dunedin Community Boards

GDP:

According to the 2012 Otago Berl Report Dunedin GDP generated \$4.84 billion, unemployment is lower than the national average and Dunedin's population is highly qualified.

The Business Services sector has grown faster in Dunedin than it has nationwide and the City has enjoyed strong growth in tourism over the past decade - well above national activity.

NUMBER OF BUSINESSES BY TYPE:

	Outram	Waldronville	Waitati	Warrington
Agriculture, Forestry and Fishing	8	-	5	3
Mining	-	-	-	-
Manufacturing	3	2	-	1
Electricity, Gas, Water and Waste Services	-	-	-	-
Construction	17	2	7	1
Wholesale Trade	4	1	2	-

	Outram	Waldronville	Waitati	Warrington
Retail Trade	1	-	4	-
Accommodation and Food Services	5	-	-	-
Transport, Postal and Warehousing	3	3	-	2
Information Media and Telecommunications	-	-	1	-
Financial and Insurance Services	1	1	1	1
Rental, Hiring and Real Estate Services	12	3	10	3
Professional, Scientific and Technical Services	6	-	11	1
Administrative and Support Services	1	-	1	-
Public Administration and Safety	1	1	1	-
Education and Training	2	-	3	2
Health Care and Social Assistance	2	-	3	2
Arts and Recreation Services	4	2	2	2
Other Services	1	-	-	-
Total	71	33	69	27

Source: Statistics New Zealand

LIST OF HEALTHCARE FACILITIES:

	Outram	Waldronville	Waitati	Warrington
Healthcare facility / GP	1	0	2	0

OUR UFB PRIORITISATION

RATIONALE

Providing access to UFB for residents and businesses within Outram, Warrington, Waitati and Waldronville is critical for economic and community growth. While wireless delivery assists rural communities and businesses, a fibre based service will enable economic growth by more niche and main stream businesses staying and starting in these areas.

These communities have shown an interest in being included in the expanded UFB programme and do not want to be left behind. They see it as essential infrastructure that will enable them to flourish and grow, without limits placed on unreliable or out-dated Internet services. They have a lot to offer in the way of quality of life and an ideal location for people wanting to work from home.

The community boards and City fully support the case for these locations to have UFB installed.

The priority and rationale for nominating these locations is summarised in this table:

	Priority	Rationale
Outram	1 (top priority)	• Outram has a steady population growth with additional subdivisions planned in the future. • Small businesses and home based workers have consistently asked for fast broadband to allow them to operate from Outram and avoid commuting to Dunedin. • Tourism plays an important part within Outram. It is also the last major stop before the Central Otago rail trail.
Waitati	2	• Waitati has higher than average incomes with a steady increase in population as people choose to be based in a rural community. • People are choosing Waitati as house prices are cheaper and it is an easy commute to Dunedin. • Waitati has seen an increase in residents working from home. Internet access is critical to enable these home-based businesses to thrive. • Waitati also supports larger businesses that are key employers in the township.
Warrington	3	• Warrington is made up of a high percentage of educated and professional people. • Many residents already have broadband internet connections (through phone lines) and are strong supporters for having fibre based services. • There are a number of small businesses operating from home who rely on the internet and require faster speeds to prosper.
Waldronville	4	• Waldronville is a growing suburb very close to Dunedin metropolitan. • It offers larger residential properties which has led to an increase in the population of this suburb. • Small businesses and home based workers have consistently asked for fast broadband and raised that they are very near to the current UFB coverage.

AREAS OF LOCAL AUTHORITY ASSISTANCE

“As part of Dunedin’s Economic Development Strategy, the Dunedin City Council has established a Council/business relationship model. This ‘Red carpet, not red tape’ model instils a proactive and business friendly approach across the Dunedin City Council.

Enterprise Dunedin, the marketing and economic development arm of Council has dedicated staff who work with business to ensure their transactions with the Council are as smooth as possible in achieving the desired outcome.

With the Government initiative around UFB2/RBI/MBSF extensions Enterprise Dunedin will ensure a staff resource is dedicated to this ‘Red carpet’ project to ensure consents and requests are managed appropriately through the local government system.

We have the opportunity to assist to reduce the costs to deploy UFB Infrastructure to the areas outlined in our district and optimise use of the infrastructure.”

John Christie
Enterprise Dunedin Director

CONSENTS

The Dunedin City Council are extremely supportive of the UFB2 extension programme and will work with chosen suppliers to ensure a smooth consenting process for the areas nominated within this document.

Information from the Dunedin City Council Consents team

Many telecommunication roll outs within Dunedin comply with the District plan performance standards and or national standards, except when they are located in Landscape Overlays or Heritage Precincts. As a result, it appears likely that the proposed UFB extension roll outs in this document will not trigger a requirement for a resource consent if landscape areas are avoided and utility standards are complied with.

The Dunedin City District Plan

Detailed rules on utilities are contained in the Utilities Section and this permits the following: Underground cabling, and above ground cabling on existing poles or additional poles within the area serviced by existing poles. Above ground extensions to the existing serviced area will require resource consent.

Landscape overlays and Heritage Precincts

Due to their greater sensitivity to visual effects Landscape Overlays and Heritage Precincts have additional district plan controls. The location of communications infrastructure in these areas will necessitate a resource consent process.

IDENTIFICATION OF INFRASTRUCTURE

Where the Dunedin City Council owns existing infrastructure that will support the rollout of UFB we will endeavour to work with the chosen telecommunications supplier to provide access.

Existing Pole Infrastructure

Aerial rollout of fibre is a possibility, subject to satisfactory commercial and operational agreements.

Pole infrastructure is owned by Aurora Energy. Aurora Energy already work closely with Chorus to facilitate access to poles and place fibre and other equipment overhead. Aurora Energy have had a long relationship with Chorus for the purpose of pole attachment to each other's assets and work hard on making sure that the process is well coordinated and efficient.

Existing Ducting

Existing ducting in the UFB extension areas outlined is scarce. Please refer to attachment 2 for existing water mains information.

UPTAKE AND AWARENESS ASSISTANCE

The Gigatown competition raised awareness of, and increased conversations about, UFB and its benefits to Dunedin. As at 7 April 2015, Dunedin fibre orders had grown from 2,700 to 4,039 since gigabit connections were launched on 25 February 2015. This has taken the City's fibre uptake rate from 11.5% to 17%.

Dunedin City Council will continue to utilise existing communication channels to outline the benefits of UFB, its availability in our region, and encourage further uptake amongst businesses and residents.

As part of the Gigatown Plan for Success, we are ensuring all of the members of our community have access to UFB via various free internet hotspots. This network will create wireless and fixed cable connections for the community and visitors, free of charge. The additional areas nominated in this ROI will be included in the plan.

More information on how Dunedin will increase uptake and awareness will be within our Digital Enablement Plan.

INVESTMENT OPTIONS

Dunedin City Council wants to invest in this opportunity for our citizens, visitors and future generations. We will consider co-investment with the Crown where this may accelerate deployment.

Through the Grow Dunedin Partnership, a governance body setup to oversee the Economic Development Strategy, we will consider how costs can be reduced for deployment and marketing promotion through project based funding that supports economic prosperity in Dunedin.

OTHER WAYS WE CAN ASSIST

We are also working with our businesses and our community to investigate the best ways increase awareness and uptake within our district.

Rural Broadband Initiative 2.0 (RBI2)

INTRODUCTION

Residents of Dunedin's rural communities are geographically isolated, in some cases having to travel two hours to reach central Dunedin. The smaller rural communities play an important role in servicing the agricultural sector, providing tourism activities and transportation services. Through the consultation process for this ROI we also heard of many home based businesses operating in the rural community.

Geographic isolation results in greater reliance on quality Internet for:

- Access to financial /IRD services, such as online banking and small business accounting software,
- Access to online business support/compliance services like Nait and Alliance/Silverfern Farms,
- Online reservation systems for those operating accommodation/tourism ventures, and
- Access to online communication media including email, social media, websites and news.

The areas nominated in this ROI have poor Internet access and struggle to use online services. This is stifling economic growth and threatening longer term viability of these communities with businesses and community members moving to locations that have better Internet access.

GEOGRAPHIC LOCATIONS

Dunedin City Council wish to nominate the following areas within Dunedin for the RBI 2 programme:

- Middelmarsh, Dunedin
- Strath Taieri, Dunedin (*Including Pukerangi, Sutton, Shannon, Lee Stream, Hindon, Clarks Junction*)
- Hyde, Dunedin
- Taiaoroa - Cape Saunders, Otago Peninsula, Dunedin

These locations are based on existing area within the Dunedin City boundary. Please refer to attachment 3 for detailed mapping information.

2013 CENSUS DATA

	Hyde	Middelmarsh	Strath Taieri	Taiaoroa – Cape Saunders
Population	75	156	432	474
No. of households	24	66	162	234
Median household income	\$85,000	\$38,300	\$62,500	\$36,900
Percentage of households with internet access	75%	64%	68%	61%

ADDITIONAL INFORMATION

Statistics New Zealand population growth projections to 2021

Growth projections based on a 2006 base for a medium growth rate.

	Hyde	Middlemarch	Strath Taieri	Taiaroa – Cape Saunders
2006 (base)	60	170	450	510
2011	70	170	470	510
2016	70	160	480	500
2021	70	170	490	500

Description of business activities by area

	Hyde	Middlemarch	Strath Taieri	Taiaroa – Cape Saunders
Business Activities	• Tourism; including accommodation and Central Otago Rail Trail related tour operators. • Transport; including Cook Transport and McClarens Transport. • Farming; including home offices and agricultural support products.	• Tourism and hospitality; including Cafes, Otago Central Rail Trail Operators and accommodation providers. • Taieri Gorge Train ends at Middlemarch. • Home Office; including web design, IT support and programming developers. • Farming and agriculture; including shearing, transport, home offices, and agricultural support products. • Strathdale Honey business and staff. • Education; including Strath Taieri School and Middlemarch Playcentre.	• Farming; including shearing and fencing contractors, home offices, and agricultural support products. • Tourism; including accommodation and small tour operators. • Taieri Gorge Train ends at Pukerangi.	• Tourism; including Albatross colony, Monarch Wildlife Cruises, Penguin Place, Natures Wonders. Wildlife viewing on beaches. • Farming and Agriculture; including shearing and home offices.

Information provided by Community Boards.

GDP:

According to the 2012 Otago Berl Report Dunedin GDP generated \$4.84 billion, unemployment is lower than the national average and Dunedin's population is highly qualified.

The Business Services sector has grown faster in Dunedin than it has nationwide and the City has enjoyed strong growth in tourism over the past decade - well above national activity.

Number of businesses by type:

	Hyde	Middlemarch	Strath Taieri	Taiaroa – Cape Saunders
Agriculture, Forestry and Fishing	16	5	82	19
Mining	1	1	-	-
Manufacturing	-	-	-	-
Electricity, Gas, Water and Waste Services	-	-	1	-
Construction	-	6	4	8
Wholesale Trade	-	-	1	-
Retail Trade	-	2	2	-
Accommodation and Food Services	1	1	-	3
Transport, Postal and Warehousing	1	1	-	1
Information Media and Telecommunications	-	-	-	-
Financial and Insurance Services	-	2	3	3
Rental, Hiring and Real Estate Services	5	2	25	5
Professional, Scientific and Technical Services	-	-	-	2
Administrative and Support Services	-	4	-	1
Public Administration and Safety	-	2	-	-
Education and Training	-	2	1	1
Health Care and Social Assistance	-	-	-	1
Arts and Recreation Services	-	-	-	4
Other Services	-	1	2	3
Total	24	29	121	51

Healthcare facilities:

	Hyde	Middlemarch	Strath Taieri	Taiaroa – Cape Saunders
Healthcare facility	-	-	-	-

OUR RBI PRIORITISATION

The severely overloaded copper network is used to access the Internet by many of the businesses and residents in Hyde, Middlemarch, Strath Taieri and Taiaroa - Cape Saunders. In many cases, the

Internet is close to Dial up speeds. Furthermore, 3G networks in these communities is poor with patchy coverage and low speeds, it is not considered a viable alternative.

These communities don't have the luxury of walking into the bank, shops and government offices to conduct everyday business operations - it could be argued that many businesses in these areas are more dependent on the Internet than metropolitan Dunedin area. Furthermore, families and individuals in these communities have the same needs as metropolitan city neighbours, especially with online education and online based entertainment becoming the norm.

The priority and rationale for nominating these locations is summarised in this table:

	Priority	Rationale
Middlemarch	1 (top priority)	• High number of small businesses operating from home who rely on the internet. • Increasingly important agricultural service centre as farming/dairy sector grows. • Growing national and international cycling destination with the start/finish of the Otago Central Rail Trail.
Strath Taieri	2	• Strath Taieri has many home based businesses operating in the farming and agriculture industries. • A growing location that is seeing an increase in permanent population as well as seasonal increase through transient and migrant workers.
Taiaroa – Cape Saunders	3	• Taiaroa – Cape Saunders is a popular tourist destination with many tour operators requiring improved internet speed to cope with online booking and marketing. • High expectations from tourists for Internet access.
Hyde	4	• Hyde is the furthest hinterland town in Dunedin and has many farming home based businesses. • Increasingly important agricultural service centre as farming/dairy sector grows. • Cook Transport operate a fleet of haulage vehicles Nationwide.

AREAS OF LOCAL AUTHORITY ASSISTANCE

The Dunedin City Council can assist in the following ways to reduce the costs to deploy RBI infrastructure in the locations outlined.

CONSENTS

Information provided by the Dunedin City Council consents team

The Dunedin City Council are extremely supportive of the RBI programme and have established relationships with local vendors. We can utilise these relationships, working closely with our local vendors and, where possible, expedite the consents process so that the deployment process is as efficient as possible with any potential delays mitigated and/or minimised.

We will ensure most areas can provide for wireless facilities (provided that the facilities to be installed comply with the District Plan rules for size of masts and antennae). Taiaroa-Cape Saunders area is

located within landscape areas that are subject to landscape protection rules. Resource consents are likely to be required for facilities in these landscape areas unless the structures are located within 50m of an existing building that has a floor area 50% larger than the floor area of the proposed structure.

The Dunedin City District Plan

Rules on utilities are contained in the Utilities Section and this permits wireless communication through aerials/antennae and their support structures subject to compliance with utilities section performance standards.

IDENTIFICATION OF INFRASTRUCTURE

There is no telecommunications infrastructure owned by the Dunedin City Council in the sites specified.

Where possible, we intend to provision land or utility power for cell towers. In addition we will investigate road access to towers, ensuring access where it is within our means.

UPTAKE AND AWARENESS ASSISTANCE

We will utilise our existing communication channels (both online and offline) to outline the benefits of RBI and its availability in our region, encouraging uptake amongst the residents and businesses within those communities.

As part of the Digital Enablement plan we will conduct research with both businesses, educators and residents in the RBI areas to understand their interest in RBI uptake, their current frustrations and challenges with Internet access. This information will be used to determine how we can help them make the most of this opportunity through residential and business uptake.

We intend to work closely with the successful bidder contracted to deploy RBI, attempting to remove roadblocks and encourage uptake in our communities.

INVESTMENT OPTIONS

Dunedin City Council wants to invest in this opportunity for our citizens, visitors and future generations. We will consider co-investment with the Crown where this may accelerate deployment.

Through the Grow Dunedin Partnership, a governance body setup to oversee the Economic Development Strategy, we will consider how costs can be reduced for deployment and marketing promotion through project based funding that supports economic prosperity in Dunedin.

OTHER WAYS WE CAN ASSIST

In addition we are working with our businesses and our communities to investigate the best ways to increase awareness and uptake within our district.

Mobile Black Spot Fund (MBSF)

GEOGRAPHIC LOCATIONS

We would like to nominate the following areas to be included in the Mobile Black Spot extension program:

- Blueskin Road; Orokonui eco-sanctuary
- Middelmarsh and Strath Taieri; Central Otago rail trail, Pukerangi
- Otago Peninsula; Allans Beach, Sandfly Bay, Papanui Inlet
- State Highway 87
- State Highway 1

Please refer to attachment 4 for detailed mapping.

SIGNIFICANT TOURIST AREAS AND STATE HIGHWAYS

MOBILE INVEST INCREASES VISITOR EXPERIENCE AND GROWS BUSINESS

The locations nominated include significant tourist areas and attractions in Dunedin City. Tourists increasingly demand access to mobile services to share and communicate information as well as plan accommodation, search for activities and book online services. Improving access will improve visitors experience and provide economic opportunities.

MOBILE INVESTMENT INCREASES SECURITY AND SAVES LIVES

Increased tourism in Dunedin will increase the likelihood of a motor vehicle accident and the need for tourists to seek assistance. The limited mobile coverage in the nominated areas is a risk with no viable way for tourists or commuters to seek help or assistance. In addition, emergency services are not able to understand and assist tourists or commuters until communications is established – this may be many hours after the incident or accident has occurred.

MOBILE INVESTMENT INCREASES EFFICIENCIES FOR ROADSIDE SERVICES

Just as the outcome of major accidents has the potential to be improved so do the efficiencies associated with minor accidents or breakdowns. Lack of communication on State Highways can lead to time wasted. The efficiency of roadside services provided by organisations would be enhanced by allowing commuters and tourists to more easily contact and provide information about their situation to breakdown services

OUR MBSF PRIORITISATION

	Priority	Rationale
Blueskin Road	1 (top priority)	• Orokonui eco-sanctuary is a major tourism attraction and has a high number of tourists using the roads to get to the attraction. There is no mobile coverage to alert emergency services in the event of an accident. • A popular location for outside activities.
Middelmarsh and	2	• Pukerangi and Middelmarsh are the final locations

Strath Taieri		for the Taieri Gorge Train, a major tourism attraction. • High number of tourists using the road with limited mobile coverage. • Middlemarch is the start/finish of the Central Otago Rail Trail • There is no coverage in this area for residents, farm staff and tourists.
Otago Peninsula	3	• South facing beaches including Allans Beach, Sandfly Bay and Papanui Inlet and Cape Saunders are all popular wildlife viewing beaches with many operations running tours. • No coverage on these beaches increasing the risk that visitors have no means to seek medical help or the emergency services.
SH87 (at locations shown)	4	• No coverage on the State Highway. • Lack of communications to call emergency response services or seek assistance. • Popular main route to Dunedin with commuters, transportation and tourists.
SH1 (at locations shown)	5	• No coverage on the State Highway. • Lack of communications to call emergency response services or seek assistance. • Popular main route to Dunedin with commuters, transportation and tourists.

AREAS OF LOCAL AUTHORITY ASSISTANCE

Information provided by the Dunedin City Council consents team

CONSENTS

The Dunedin City Council are extremely supportive of this proposal. We will work closely with our local vendors and, where possible, expedite the consents process so that the deployment process is as efficient as possible with any potential delays mitigated and/or minimised.

IDENTIFICATION OF INFRASTRUCTURE, LAND OR LAND ACCESS

The Dunedin City Council are unaware of any telecommunications infrastructure they own that will be of assistance to the provision of RBI in these areas. Where possible, we intend to provision land or utility power for cell towers. In addition we will investigate road access to towers, ensuring access where it is within our means.

INVESTMENT OPTIONS

Dunedin City Council wants to invest in this opportunity for our citizens, visitors and future generations. We will consider co-investment with the Crown where this may accelerate deployment.

Through the Grow Dunedin Partnership, a governance body setup to oversee the Economic Development Strategy, we will consider how costs can be reduced for deployment and marketing promotion through project based funding that supports economic prosperity in Dunedin.

OTHER WAYS WE CAN ASSIST

We are working with our businesses and our communities to investigate the best ways to increase awareness and uptake within our district.

2. Our Declaration

RESPONDENT'S DECLARATION		
Topic	Declaration	Respondent's declaration
ROI Process, Terms and Conditions:	I/we have read and fully understand the ROI, including the ROI Process, Terms and Conditions (shortened to ROI-Terms detailed in Section 6, as amended by Section 1, paragraph 1.6. if applicable). I/we confirm that Respondent/s agree to be bound by them.	AGREE
Collection of further information:	The Respondent/s authorises the Buyer to: a. collect any information about the Respondent, except commercially sensitive pricing information, from any relevant third party, including a referee, or previous or existing client b. use such information in the evaluation of this Registration. The Respondent/s agrees that all such information will be confidential to the Buyer.	AGREE
Requirements:	I/we have read and fully understand the nature and extent of the Buyer's Requirements as described in Section 2. I/we confirm that the Respondent/s has the necessary capacity and capability to fully meet or exceed the Requirements and will be available to deliver throughout the relevant Contract period.	AGREE
Ethics:	In submitting this Registration the Respondent/s warrants that it: a. has not entered into any improper, illegal, collusive or anti-competitive arrangements with any Competitor b. has not directly or indirectly approached any representative of the Buyer (other than the Point of Contact) to lobby or solicit information in relation to the ROI c. has not attempted to influence, or provide any form of personal inducement, reward or benefit to any representative of the Buyer.	AGREE
Conflict of Interest declaration:	The Respondent warrants that it has no actual, potential or perceived Conflict of Interest in submitting this Registration, or entering into a Contract to deliver the Requirements. Where a Conflict of Interest arises during the procurement process the Respondent will report it immediately to the Buyer's Point of Contact.	AGREE

Details of Conflict of Interest:

DECLARATION

I/we declare that in submitting the Registration and this declaration:

I/we declare that in submitting the Registration and this declaration:

- a. the information provided is true, accurate and complete and not misleading in any material respect
- b. the Registration does not contain Intellectual Property that will breach a third party's rights
- c. I/we have secured all appropriate authorisations to submit this Registration, to make the statements and to provide the information in the Registration and I/we am/are not aware of any impediments to enter into a Contract to deliver the Requirements.

I/we understand that the falsification of information, supplying misleading information or the suppression of material information in this declaration and the Registration may result in the Registration being eliminated from further participation in the ROI process and may be grounds for termination of any Contract awarded as a result of the ROI.

By signing this declaration the signatory below represents, warrants and agrees that he/she has been authorised by the Respondent/s to make this declaration on its/their behalf.

Signature:

Full name:

Title / position:

Name of organisation:

Date: 10/11/15

Sohn Christie

Sohn Christie

Director

Enterprise Dunedin

Des Adamsan

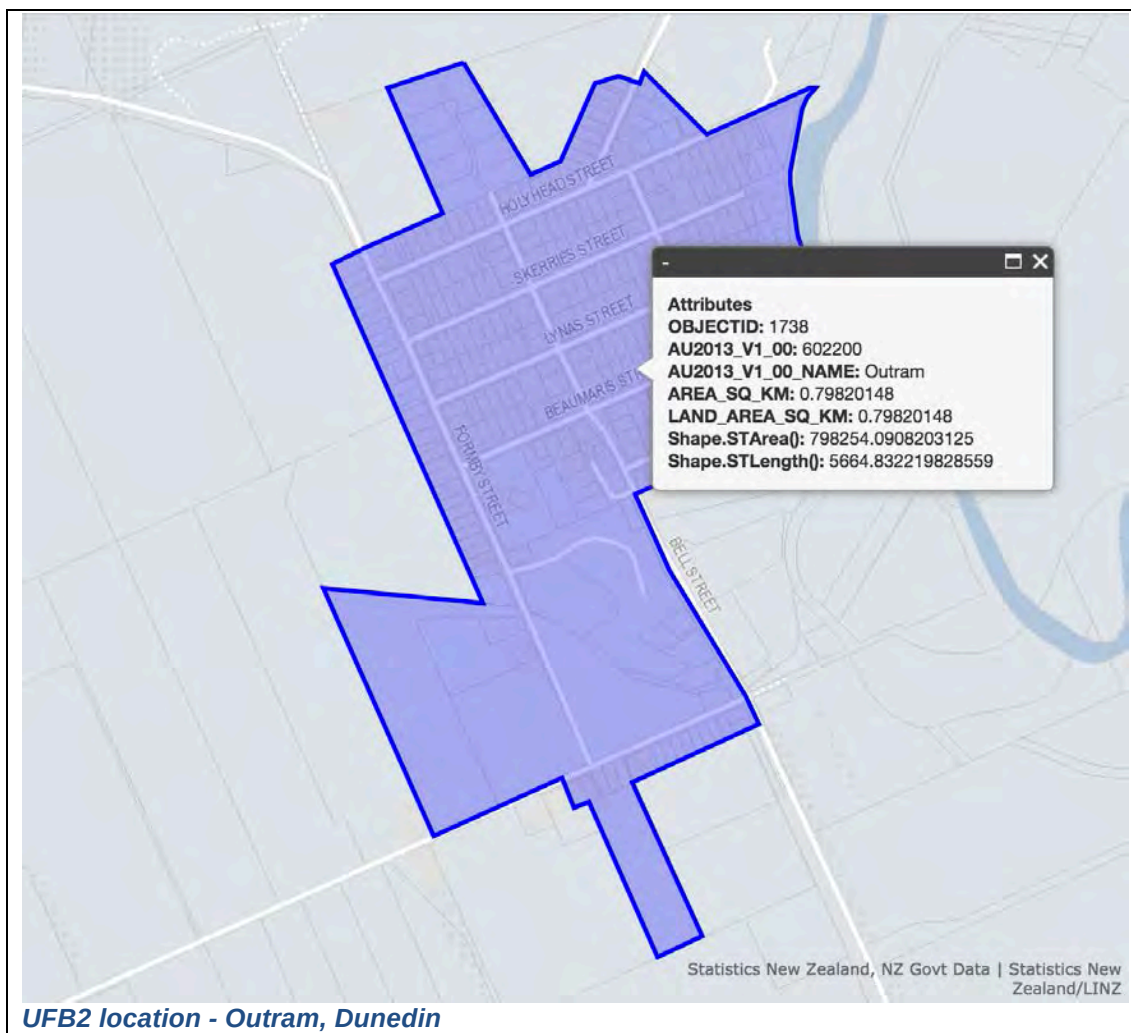
Des Adamsan

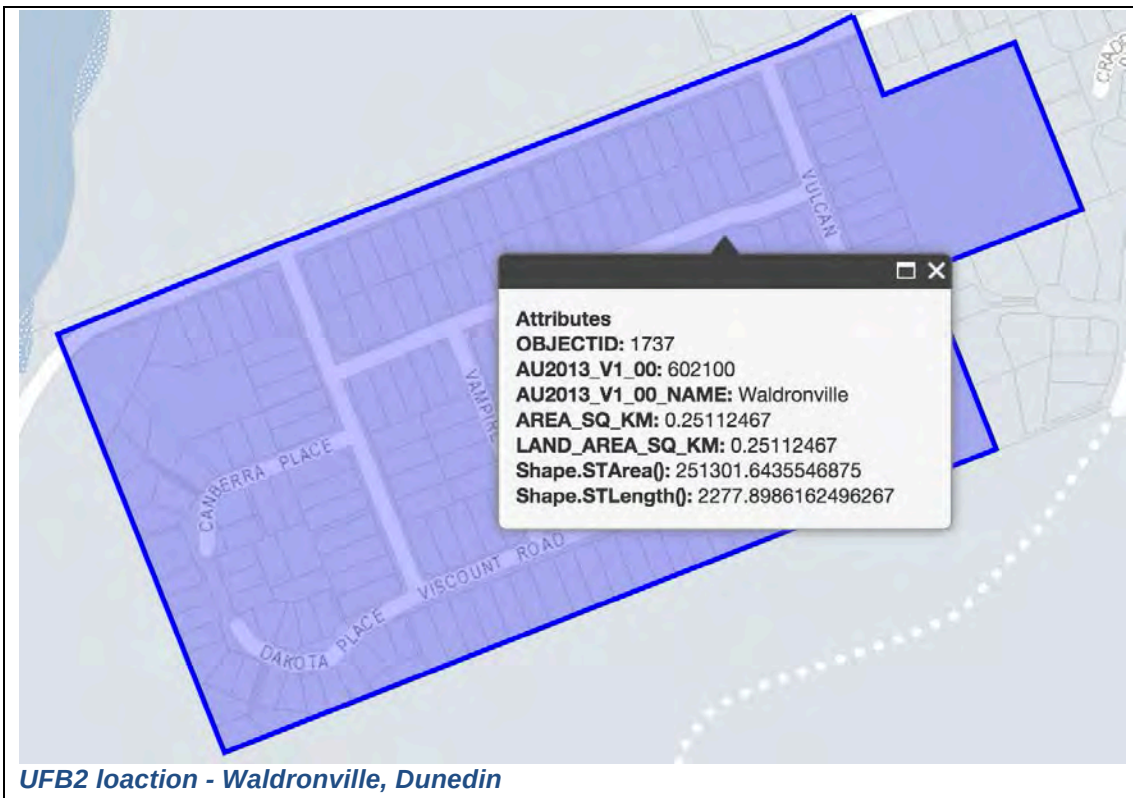
Economic Development Manager

Enterprise Dunedin

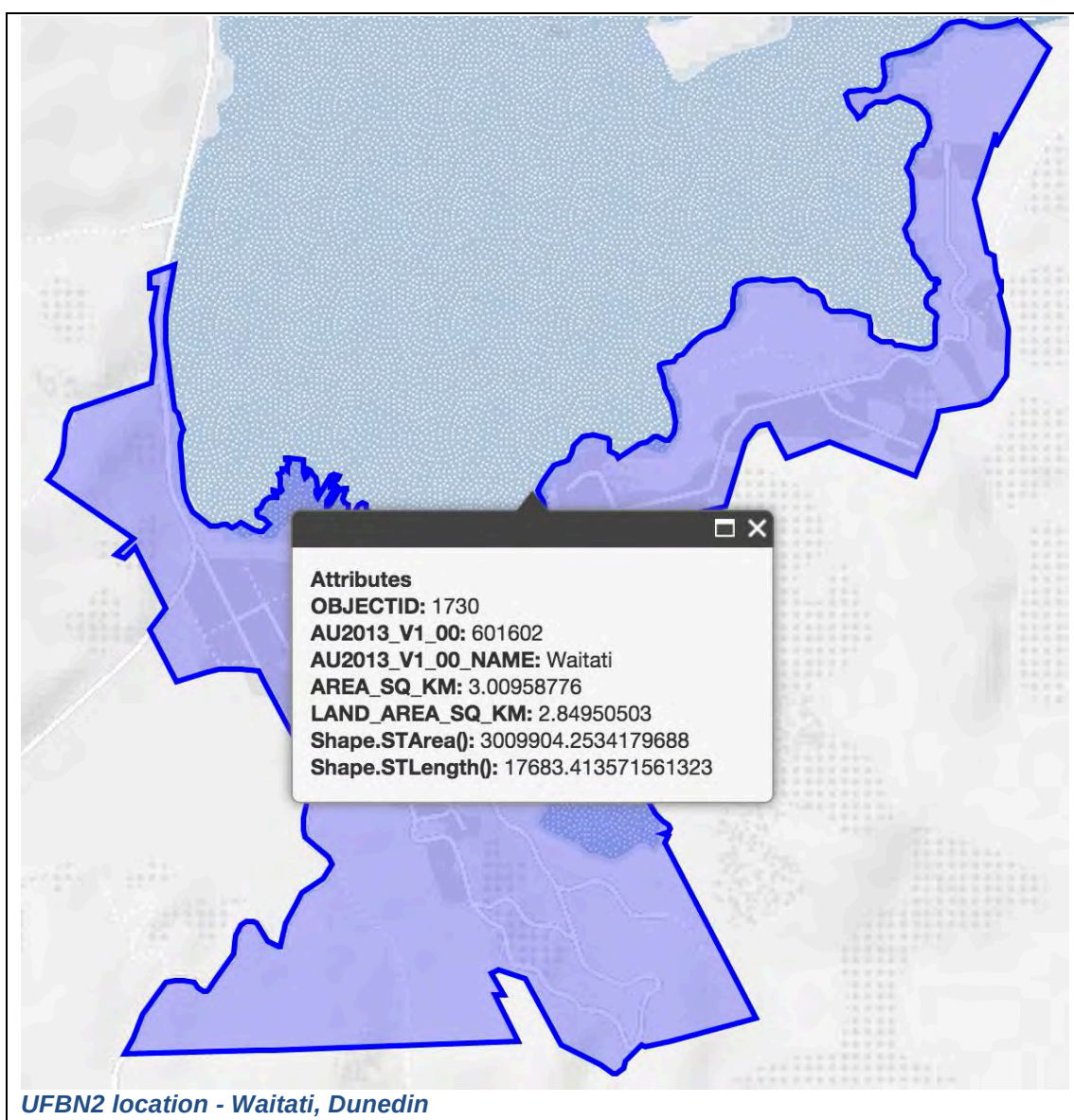
3. Attachments

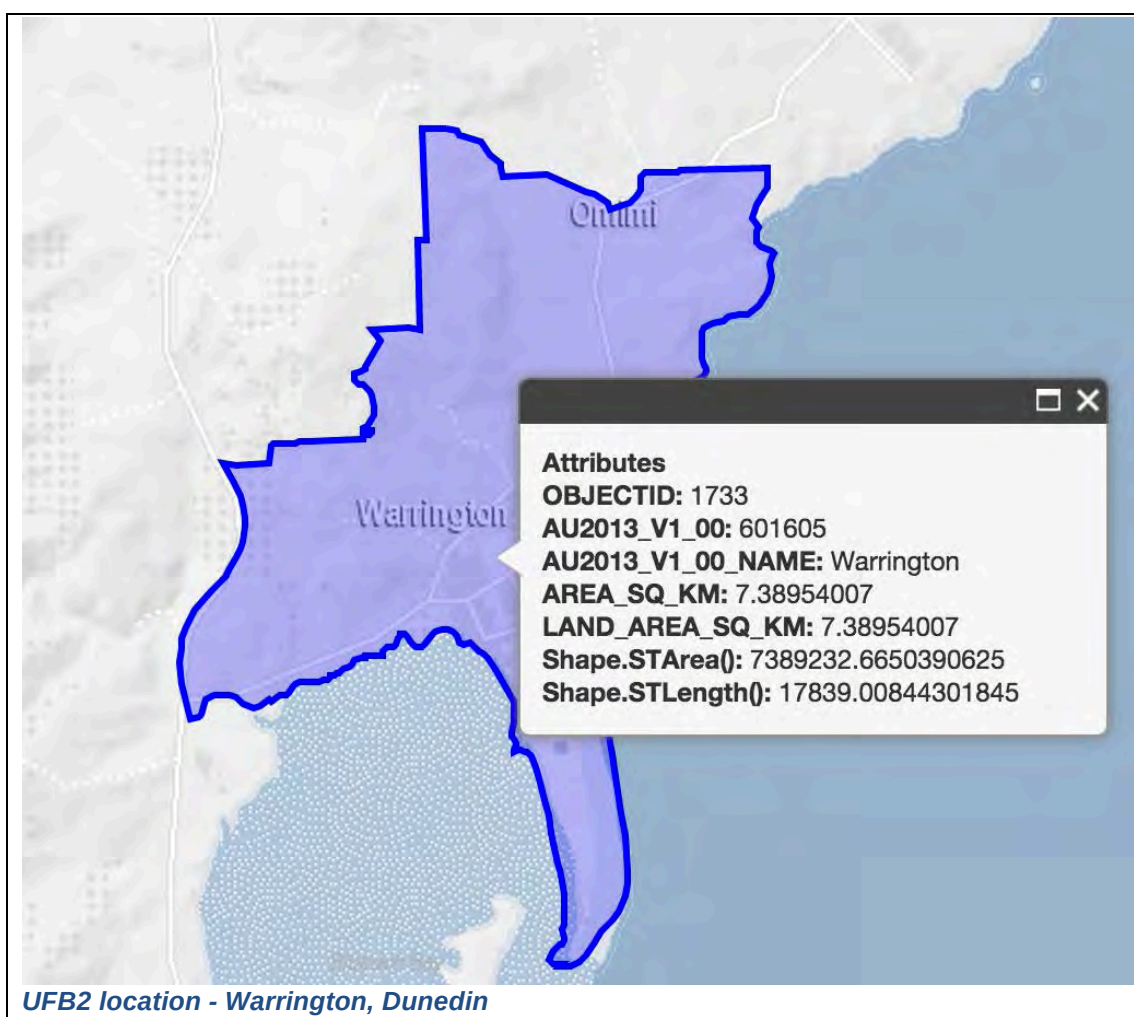
Attachment 1 – Ultra Fast Broadband 2 Maps



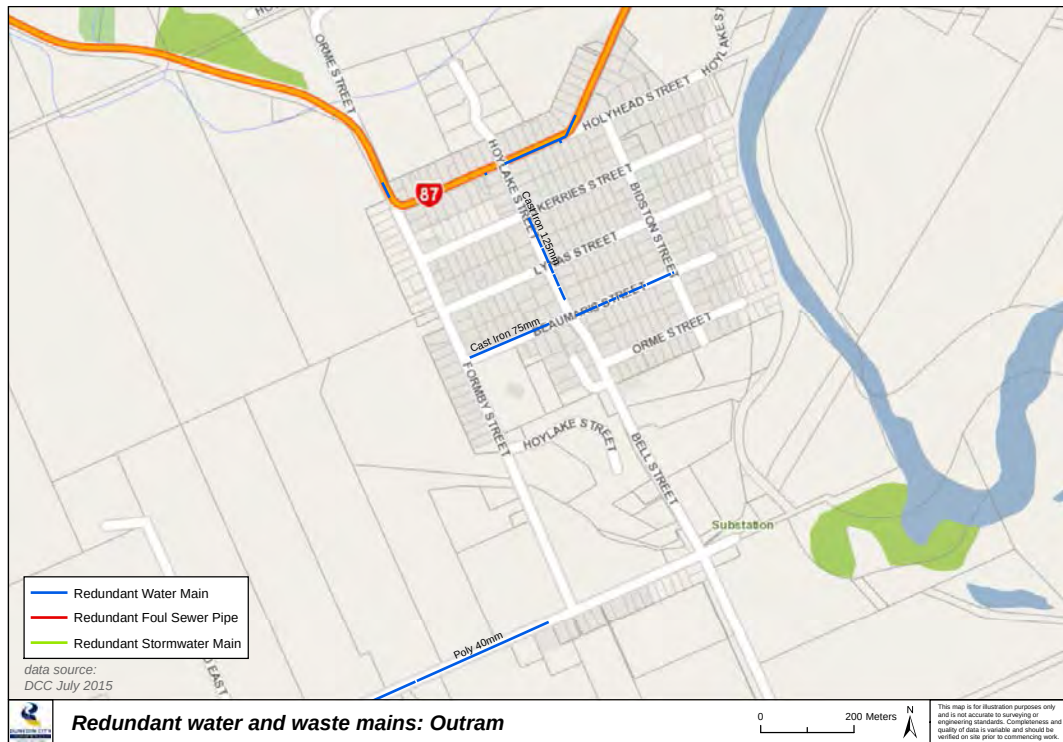


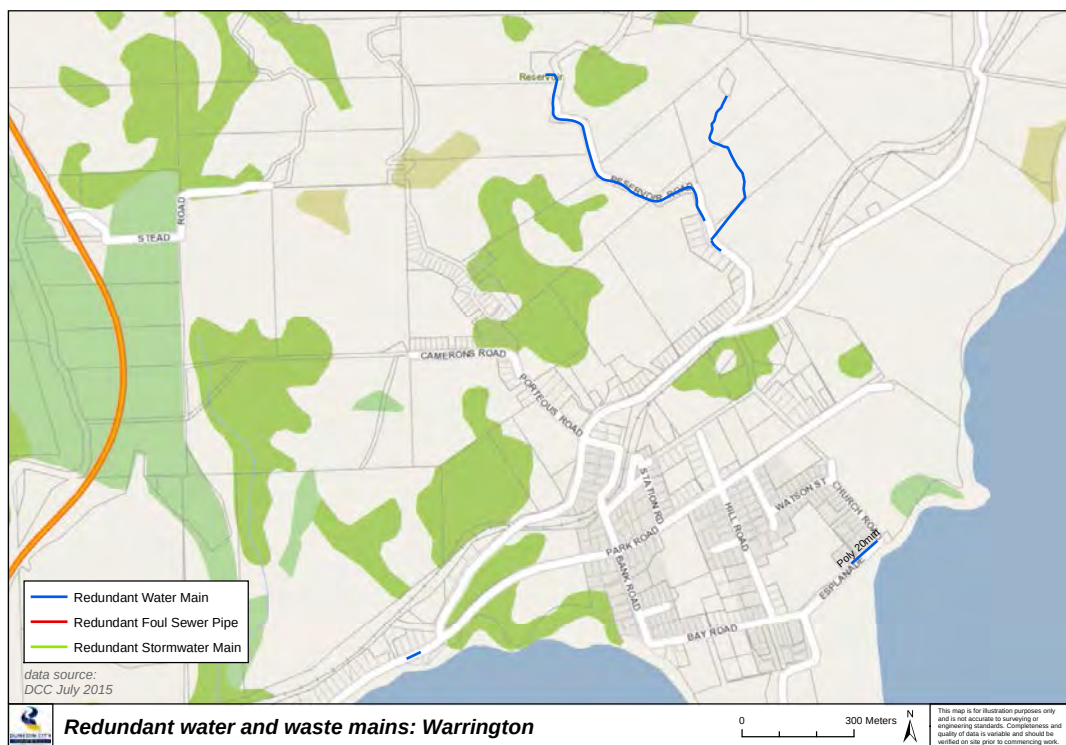
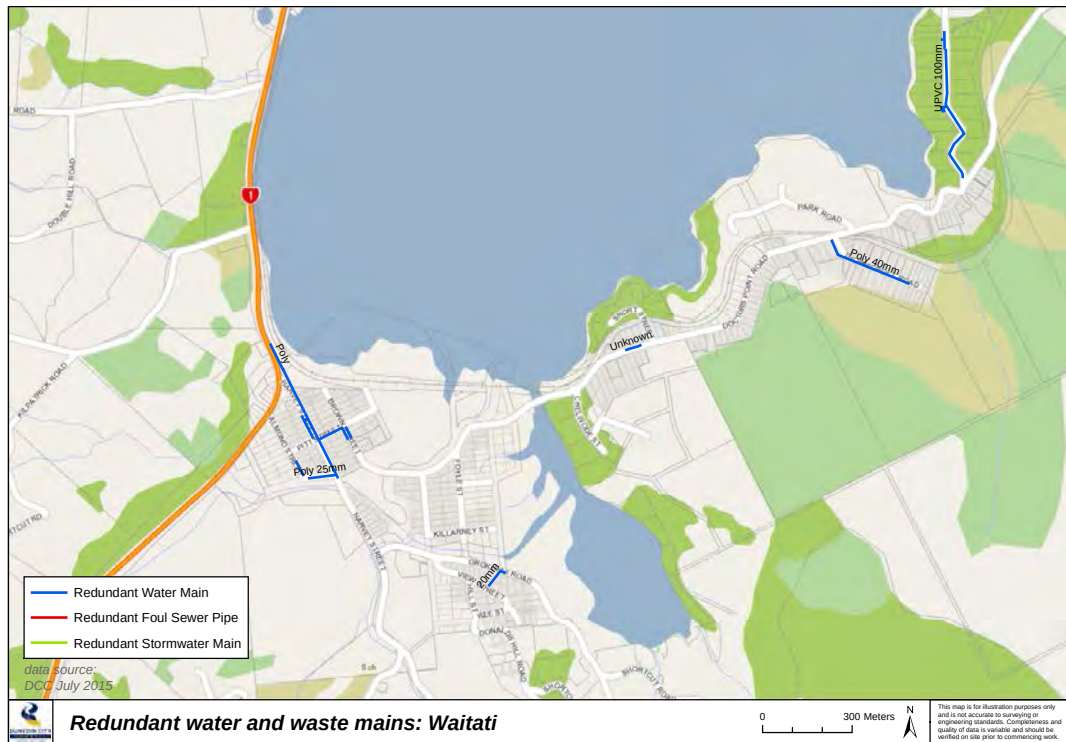
UFB2 loaction - Waldronville, Dunedin





Attachment 2 – Redundant Water Mains



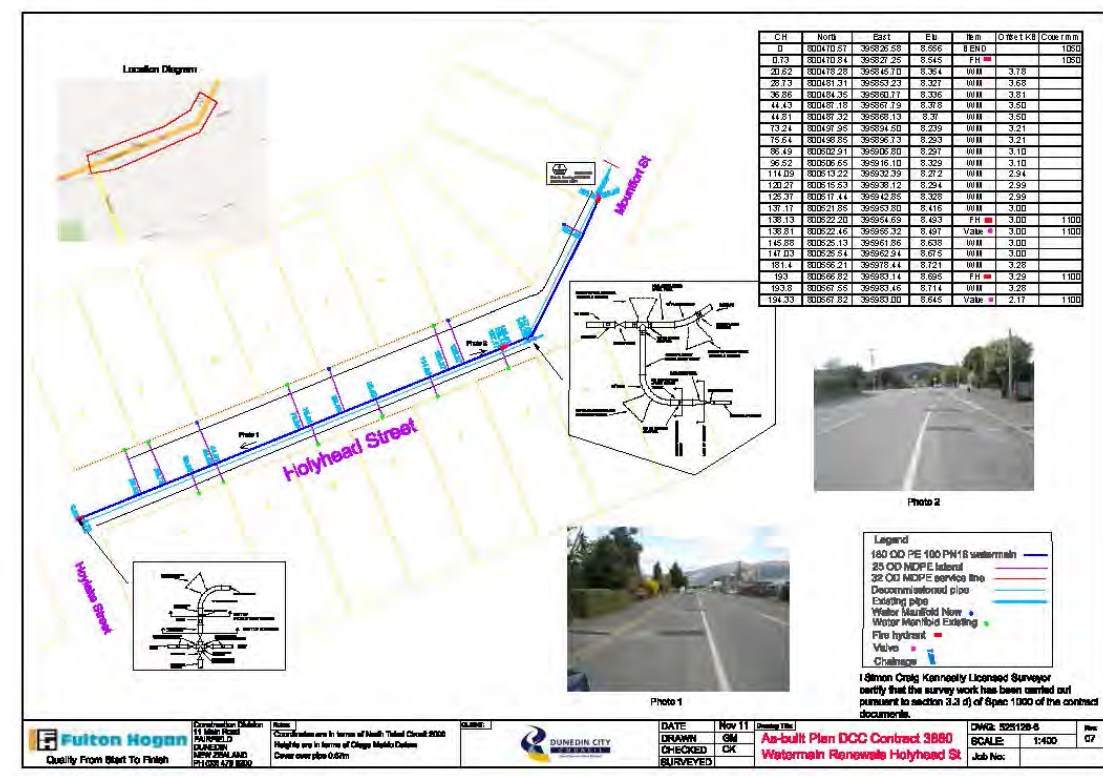


Example of further details that can be provided to the supplier to decide if it will be useful for UFB provisioning.

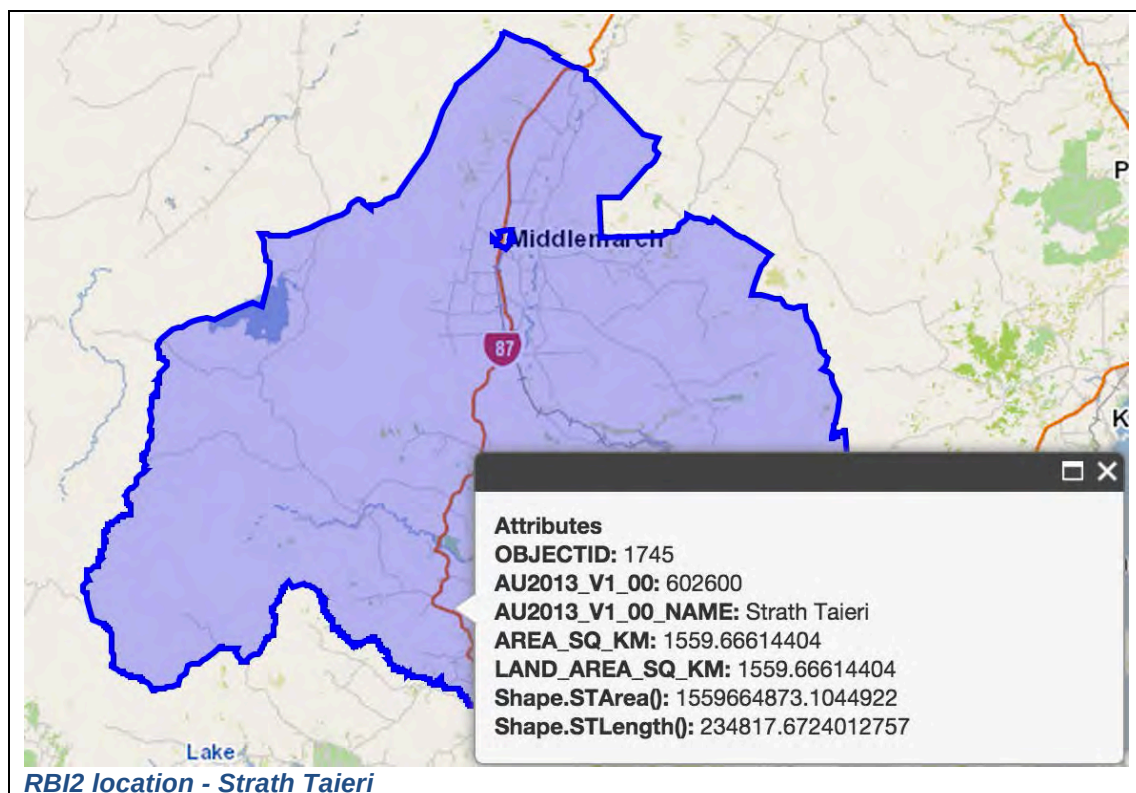
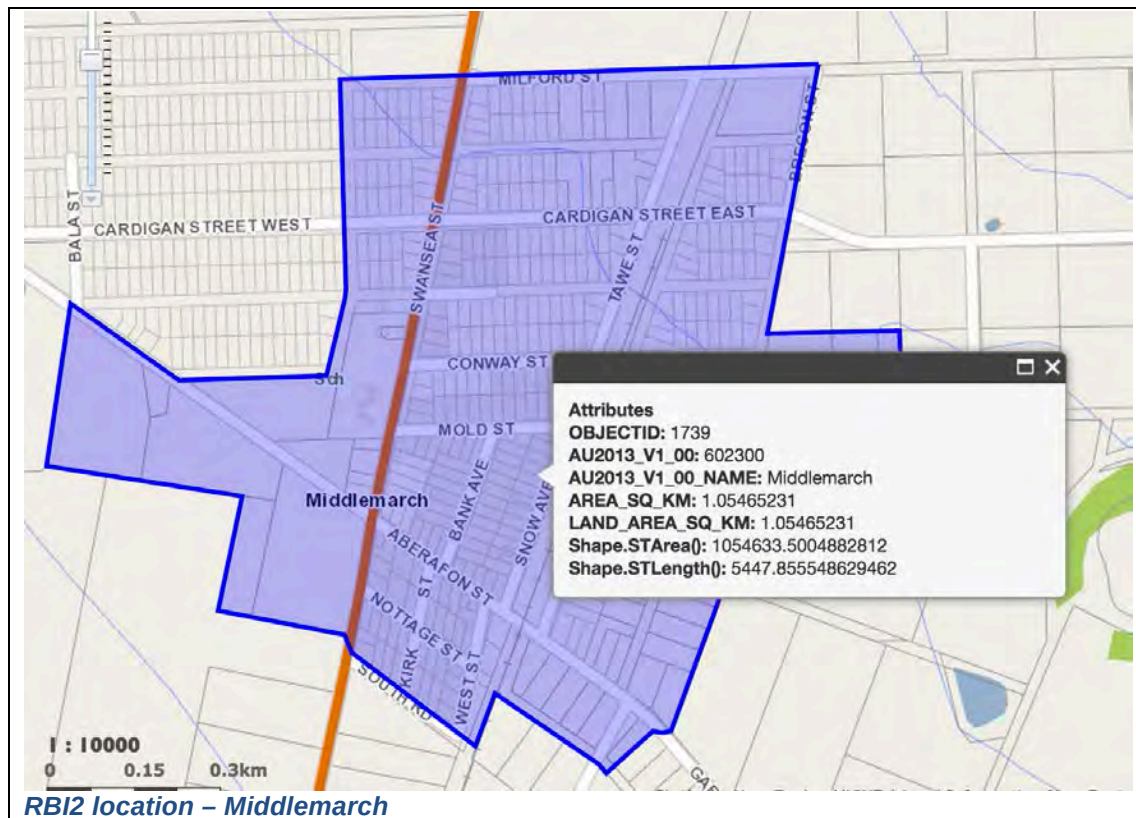
The following Outram pipes have been redundant the new mains were commissioned in Feb/March 2015:

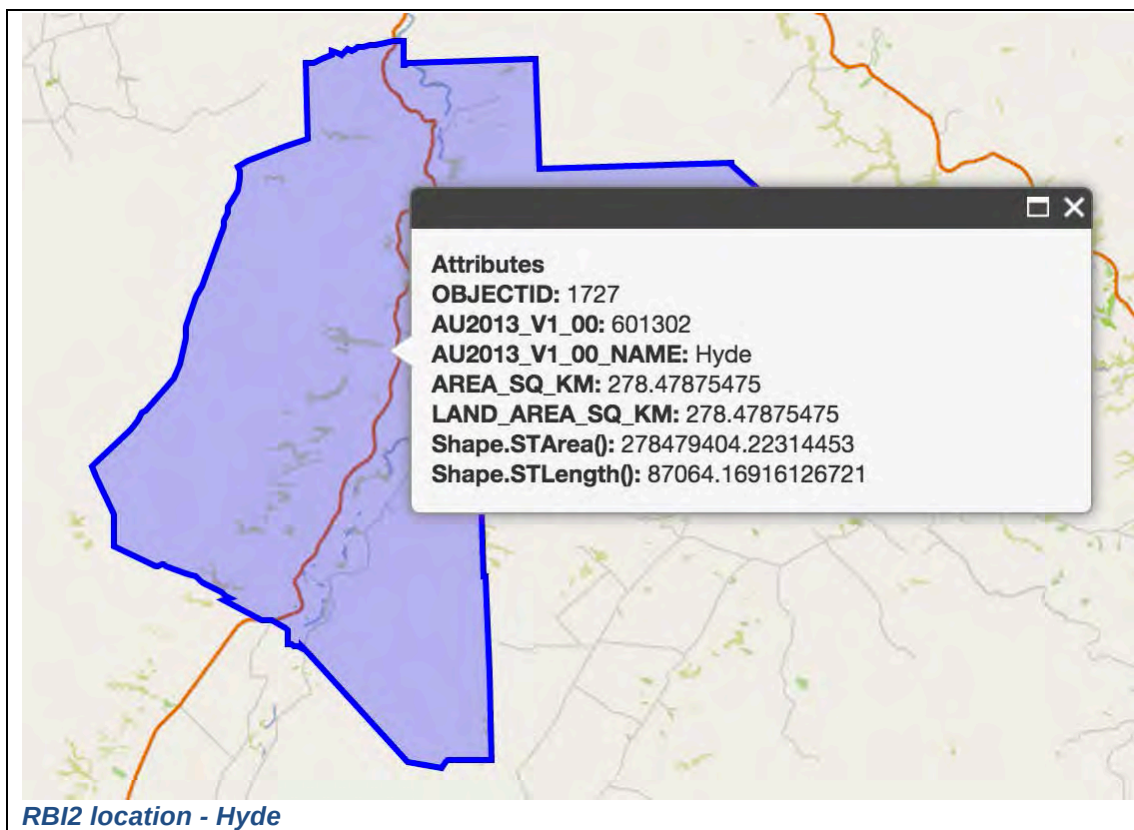
- Formby St (Beaumaris to Holyhead)
- Mountfort St (no.4 - no.22 and beyond up to WTP)
- Holyhead St (Formby to Hoylake)

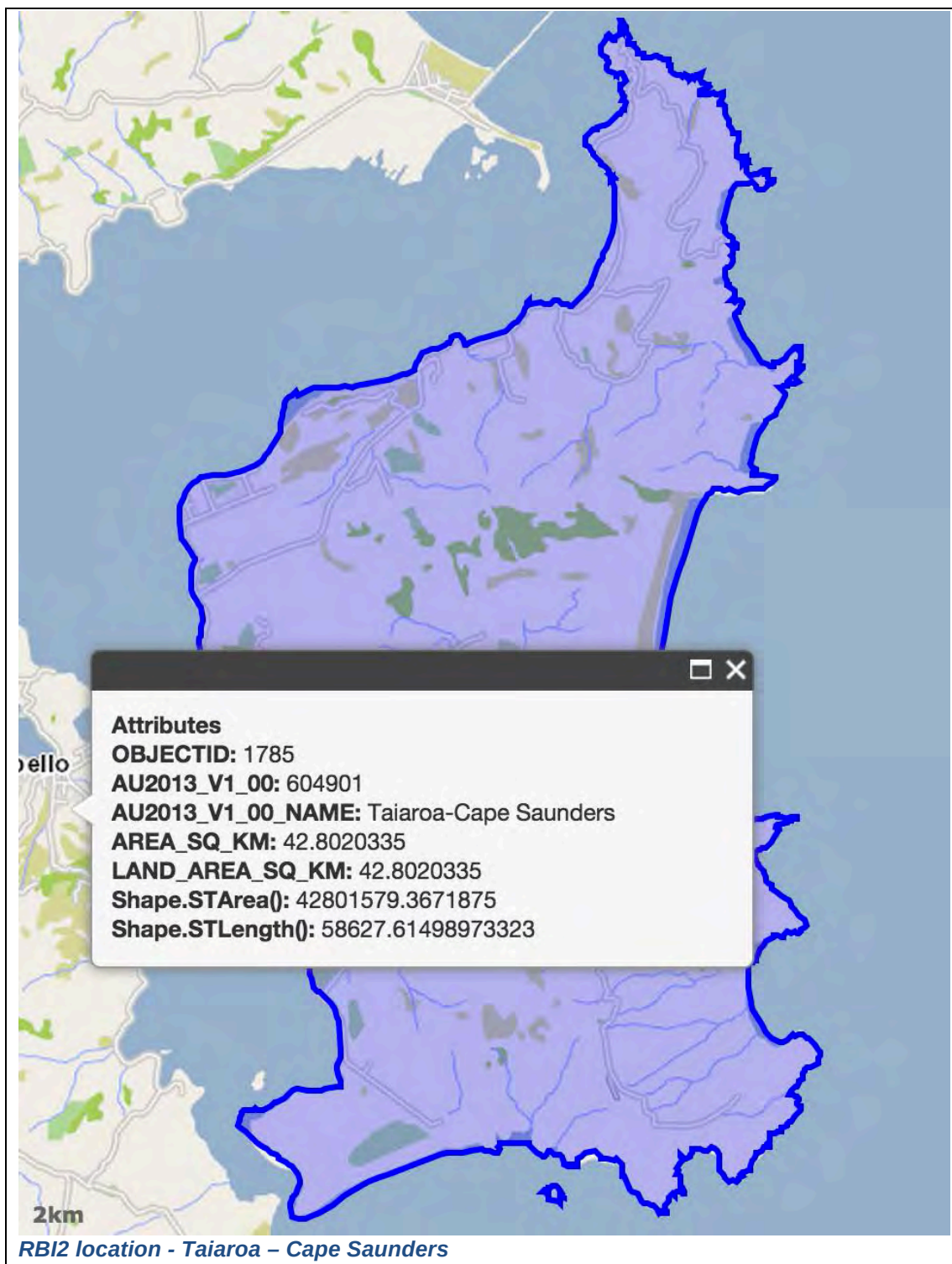
The image below is an example of Holyhead Street, one of the as-builts showing alignment, size etc so you can decide if its going to be any good to use for fibre. We can dig out detailed plans of each of the disused mains listed above and you can decide if you want to use them.



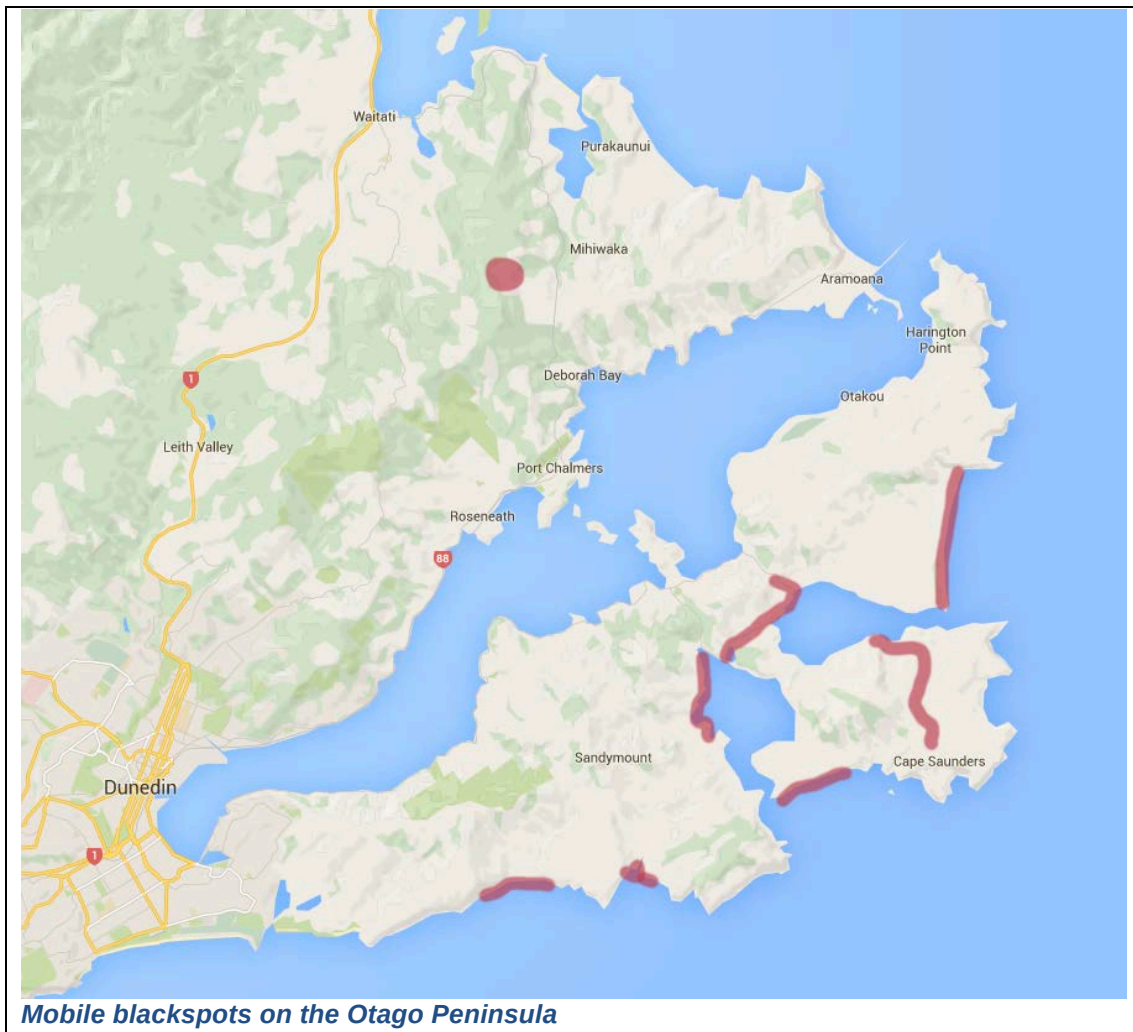
Attachment 3 – Rural Broadband Initiative 2 Maps

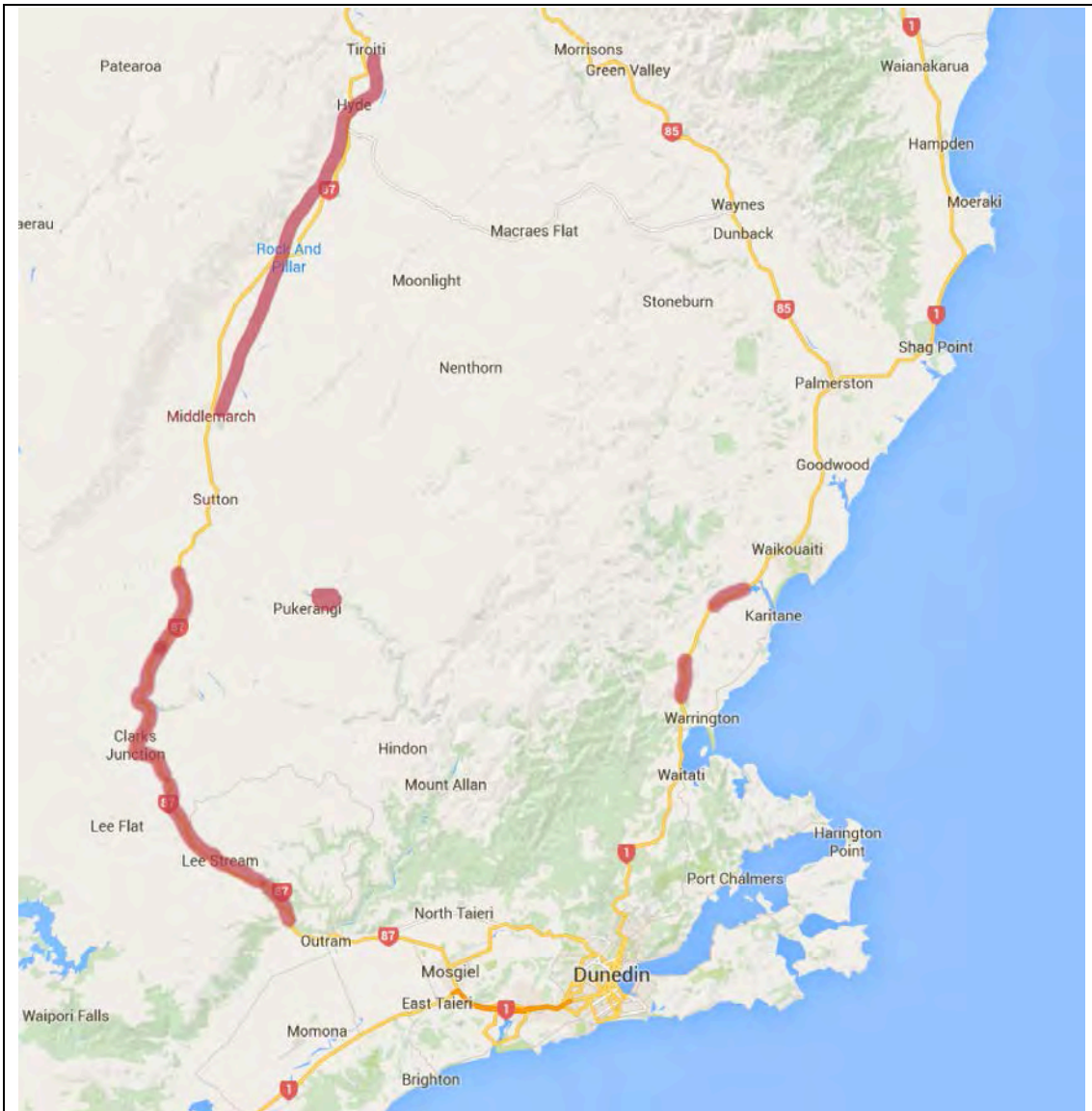






Attachment 4 – Mobile Black Spot Fund Maps





Mobile black spots on SH1, SH8, Pukerang and Otago Central Rail Trail